Protection and Augmentation of Water Supplies 2010/2011

Santa Clara Valley Water District

39th annual report

Enclosures

2010/11 recommendation groundwater production charges

Sections

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Future water requirements and water supply availability 2

Programs to sustain supply reliability 3

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February 2010

Protection and Augmentation of

This is the 39th annual report on the Santa Clara Valley Water District's activities in the protection and augmentation of the water supplies. This report is prepared in accordance with the requirements of the District Act, section 26.5.

- Section 1 of the report provides information on the present water requirements and water supply availability.
- Section 2 addresses future water requirements and water supply availability.
- Section 3 discusses programs needed to sustain water supply reliability into the future.
- Section 4 provides the financial analysis of the water district's water utility system including future capital improvement and maintenance requirements, operating requirements, financing methods and the recommended groundwater production charges by zone for fiscal year 2010/2011.

The water district is once again proposing no rate increase. Instead, we eliminated positions and reduced costs to hold the rate for an average household in San Jose, for example, at about $22.50 per month for the third consecutive year. We continue to seek ways to cut costs.

County-wide, over 100,000 acre-feet or 65% of the groundwater pumped in 2009 originated from water replenished into the aquifer by the water district using local water stored in reservoirs and water imported from the Sierra Nevada mountains through the delta.

In addition, roughly 110,000 acre-feet of water used by households and businesses throughout the northern part of the county is water treated and disinfected at the water district's treatment plants. Providing treated water to the residents supplements and helps preserve groundwater.

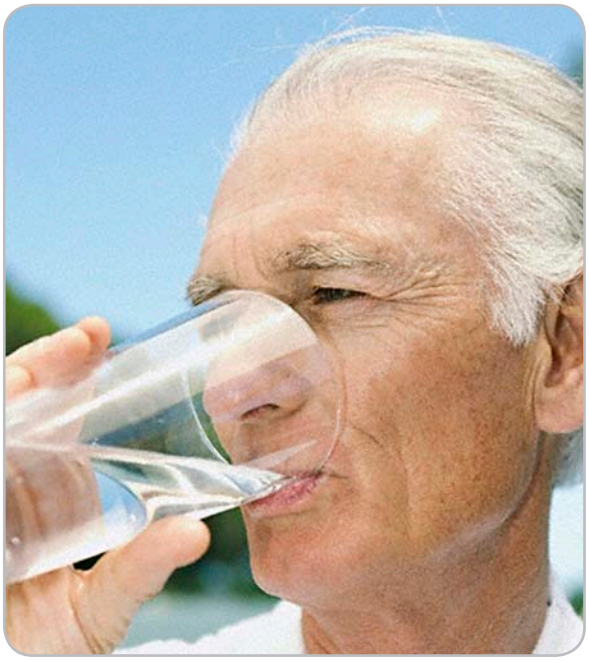
Without the water district's actions to augment local supplies, replenish and preserve the groundwater aquifer, groundwater levels will decline, wells will run dry and permanent land subsidence (sinking of the ground) will occur again.

What do groundwater production charges pay for?

What you get	What we do
Benefits • Reliable, healthy and clean drinking water • Diverse water supply sources • Protected and sustained water resources • Maximized water conservation and recycling	**Replenish the groundwater basin** • Operate and maintain local reservoirs to capture water and fill recharge ponds. • Purchase imported water. **Ensure safe drinking water** • Monitor and protect groundwater from pollutants. • Ensure proper construction and destruction of wells. **Construct, maintain and repair** • Plan and construct improvements to infrastructure such as dams, pipelines, ponds, treatment plants and pump stations. • Operate and maintain pipelines and pumping plants to help sustain the groundwater aquifer.

Santa Clara Valley Water District

The mission of the district is a healthy, safe and enhanced quality of living in Santa Clara County through watershed stewardship and comprehensive management of water resources in a practical, cost-effective and environmentally sensitive manner for current and future generations.



Santa Clara Valley Water District SM

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SAN JOSE, CA 95118-3686
TELEPHONE (408) 265-2600
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www.valleywater.org
AN EQUAL OPPORTUNITY EMPLOYER

February 26, 2010

Dear Key Stakeholder in the water district's effort to ensure a reliable water supply:

You are receiving this letter because you have a stake in the water district's effort to ensure a reliable water supply for Santa Clara County now and into the future. In the past you would have received the annual report on the Protection and Augmentation of Water Supplies with this mailing. However, in an attempt to reduce costs and be more environmentally friendly, we have posted the annual report at the following URL: www.valleywater.org.

This report is the 39th annual report on the Santa Clara Valley Water District's activities to protect and augment the water supplies of the district. This report, required by the Santa Clara Valley Water District Act to be published and filed prior to holding public hearings on groundwater production charges for the upcoming year, presents the basis for the recommended groundwater production charges for fiscal year (FY) 2010-11.

The water district is once again proposing no rate increase. Instead, we eliminated positions and reduced costs to hold the rate for an average household in San Jose at $22.50 per month for the third consecutive year. We continue to seek ways to cut costs.

With revenue from groundwater production charges, the water district protects and augments water supplies for the health, welfare and safety of the community. We serve you by replenishing the groundwater aquifer with local water from ponds and reservoirs and imported water from the Sierra Nevada mountains to ensure the availability of a safe, reliable supply of groundwater.

Replenish the groundwater basin

- Operate and maintain local reservoirs to capture water and fill recharge ponds
- Purchase imported water

Ensure safe drinking water

- Monitor and protect groundwater from pollutants
- Ensure proper construction and destruction of wells

Construct, maintain and repair infrastructure

- Plan and construct improvements to infrastructure such as dams, pipelines, ponds, treatment plants and pump stations
- Operate and maintain pipelines and pumping plants to help sustain the groundwater aquifer

County-wide, groundwater replenished by the water district's activities makes up, on average, two-thirds of the groundwater used by residents, retailers and businesses.

Santa Clara Valley Water District

We encourage you to learn more about important groundwater issues. In addition to the information available on our web site at www.valleywater.org, there are also the following opportunities for you to gather information and provide input:

March 11, 2010 **3 p.m. to 8:30 p.m.** • Drop in at your convenience • Presentations each hour	**Informational Open House** Morgan Hill Community Center 17000 Monterey St., Morgan Hill
March 15, 2010 **3 p.m. to 8:30 p.m.** • Drop in at your convenience • Presentations each hour	**Informational Open House** Cupertino Community Hall 10357 Torre Ave., Cupertino
April 13, 2010 **9:40 a.m.** • Board meeting • Time certain	**Public Hearing (opens)** Santa Clara Valley Water District 5700 Almaden Exwy., San Jose
April 22, 2010 **6:00 p.m.** • Board meeting • Time certain	**Public Hearing (continues)** Gilroy City Hall 7351 Rosanna St., Gilroy
April 27, 2010 **9:40 a.m.** • Board meeting • Time certain	**Public Hearing (closes)** Santa Clara Valley Water District 5700 Almaden Exwy., San Jose

The water district's annual charge-setting process has always included an opportunity for you to voice your opinion. This year the process includes a formal protest procedure which improves openness and transparency.

In these tough economic times, we are pleased to continue providing you with reliable water supply with no increase in rates.

If you have questions or concerns about groundwater, this year's charge-setting process, or have thoughts on how we can better serve you, please join us at an upcoming open house or public hearing, or visit our website www.valleywater.org. You may also contact us directly by phone at (408) 265-2600 or email at clerkoftheboard@valleywater.org.

Sincerely,

Beau Goldie
Chief Executive Officer

2010

1 Present Water Requirements and Water Supply Availability

1–1 Water Supply Overview

Managing groundwater is the reason the Santa Clara Valley District (district) was formed and it remains one of the district's most important missions. Local groundwater resources make up the foundation of district water supply, but they need to be augmented by the district's comprehensive water supply management activities in order to reliably meet the needs of county residents, businesses, agriculture and the environment. These activities include direct and in-lieu groundwater recharge through the provision of treated surface water, water use efficiency, additional storage and supplemental water supplies.

Water supply in any given year is comprised of "incoming" supplies from local and imported sources, as well as previously-stored supplies withdrawn from in-county and/or out-of-county storage.

Local water supplies originate from runoff from precipitation, captured in local reservoirs and released for groundwater recharge and for the treatment plants. An additional local water supply is highly-treated recycled water used for non-potable purposes.

The district's imported sources of supply originate from natural runoff and releases from statewide reservoirs and pumped out of the Sacramento-San Joaquin Delta by the State Water Project (SWP) and federal Central Valley Project (CVP). The annual allocations of contracted supplies from the SWP and CVP are subject to cutbacks due to dry hydrologic conditions and to Delta pumping restrictions. The district may also hedge against shortages by taking deliveries of available temporary flood flows from the Delta early in the year, before imported water contract allocations and local hydrology are known. Another remedy for shortages is through the purchase of transfer water or exchanges. Most of the imported water delivered by the SWP and CVP is sent to the district's three water treatment plants and to supplement groundwater recharge. The treated water is sold to eight of the 13 water retailers located within Santa Clara County to offset groundwater pumping. Additionally, eight water retailers purchase water from the City and County of San Francisco that originates from the Tuolumne River watershed and watersheds in the Bay Area. Without these supplemental supplies, groundwater pumping would exceed sustainable groundwater extraction levels.

Although the groundwater subbasins are the district's largest water storage facility, the limiting factor of providing a reliable water supply in drought periods is the overall capacity and capability to operate a conjunctive use system of surface and groundwater supplies. Most of the local reservoirs were sized for annual operations, storing water in winter for release to groundwater recharge in summer and fall. The exception is the Anderson-Coyote reservoir system, which provides valuable carryover of supplies from year to year and can serve as a backup supply source to the district's water treatment plants when imported water deliveries are curtailed. However, dam safety operating

restrictions placed on Anderson, Coyote, Almaden, Calero and Guadalupe reservoirs have resulted in loss of storage capacity and water supply yield.

As part of its annual operations planning, the district routinely opts to carry over a portion of its imported water supplies from one contract year to the next. Even though the amount is often limited by state or federal project operators, it provides cost-effective insurance against a subsequent dry year. Additionally, the district has invested in a water banking program at the Semitropic Water Storage District which provides 350,000 acre-feet (af) of out-of-county water storage capacity. Together with water transfers and exchanges, this additional storage helps the district manage uncertainty and variability in supply as each water year develops.

1–2 Present Water Supply Conditions

Calendar year 2010 began with the question of whether the state is entering a fourth year of drought. Precipitation in water year 2008–09 (October 2008 to September 2009) was the third consecutive below average year for the state at 76 percent of average[1]. Storage at key statewide water supply reservoirs was at 69 percent of average on September 30, 2009. Runoff for water year 2008–09 in the Sacramento and San Joaquin river regions was at 65 percent of average, resulting in classifications of "dry" and "below normal" for the respective regions. Water years 2007–2009 were the 13th driest consecutive 3-year period, tied with water years 1976–1978, out of 87 years of record. These historic low carryover storage levels and restrictive Delta export pumping rules resulted in a historic low initial allocation of 5 percent of contracted water deliveries from the SWP for the year 2010. Five percent is the lowest initial allocation percentage since the SWP began delivering water in 1967. CVP allocations for 2010 have not been announced as of this writing. Table 1-2.1 summarizes the year types and final allocations from the SWP and CVP for the last three years of drought.

TABLE 1-2.1 Statewide Water Year Types and Final Imported Water Allocations

Water Year	Year Type		Final allocations to the district as % of contract amounts		
	Sacramento River	San Joaquin River	SWP	CVP	
				M&I	AG
2006–07	dry	critical	60%	75%	50%
2007–08	critical	critical	35%	75%	40%
2008–09	dry	below normal	40%	60%	10%

Locally, rainfall for the 2008–09 season at downtown San Jose was at 69 percent of average[2]. Combined storage at district reservoirs at the end of the 2008–09 water year was at 45 percent of capacity. With the series of storms in late January 2010, storage at district reservoirs has increased to around 60 percent of capacity. However, a number of the reservoirs cannot be filled to capacity because of storage restrictions in place for seismic stability, even if 2010 turns out to be wet.

[1] Statewide rainfall was 85 percent of average for the northern Sierra 8-station index for calendar year (January to December) 2009.

[2] Rainfall at San Jose (station 86) was at 11.75 inches or 81 percent of average for calendar year 2009.

While reservoirs are a visible indicator of our local water supply, the majority of our local reserves lie hidden beneath our feet in the groundwater aquifers. Because the groundwater subbasins can store three times more water than all of the local surface water reservoirs combined, Santa Clara County depends on maintaining adequate storage in the groundwater subbasins in wet and average years to get through extended dry periods like these past three years. The district's water management programs, including the mandatory 15 percent conservation target imposed in 2009, were able to keep the groundwater subbasin storage similar to end-of-2008 levels: the estimated end-of-2009 groundwater storage at the Santa Clara Subbasin, Coyote Subbasin, and Llagas Subbasin are at 245,000 acre-feet, 2,000 acre-feet, and 19,000 acre-feet respectively.

Groundwater elevations, an indicator of groundwater trends and conditions, are shown for each of the three local groundwater subbasins in Figures 1-2.1 through 1-2.3. Despite the drop in groundwater levels in the last three years because of the extended drought, overall groundwater conditions are healthy, due to the district's water management programs.

FIGURE 1-2.1 Historical Santa Clara Subbasin Groundwater Elevations, Index Well 07S01W25L001. Well located near Hamilton and Leigh Avenues in Campbell.

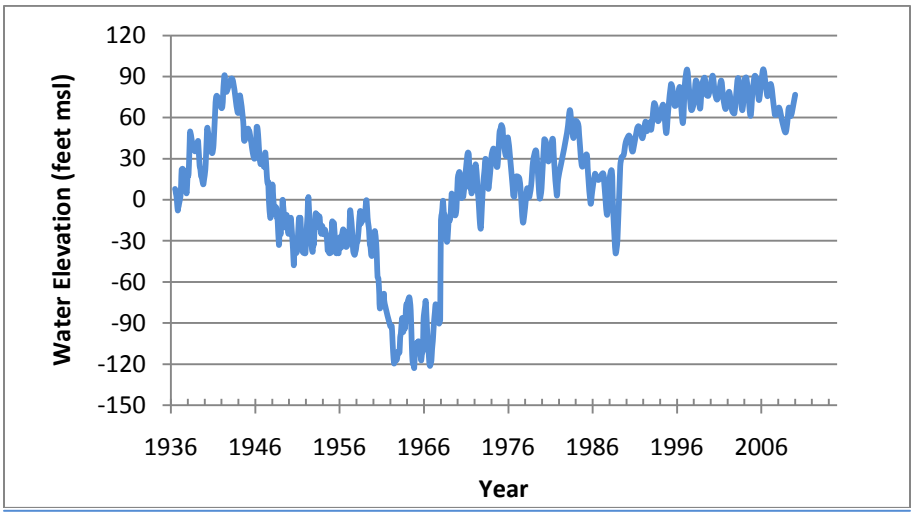


FIGURE1-2.2 Historical Coyote Subbasin Groundwater Elevations, Index Well, 09S02E02J002. Well is in the vicinity of Palm and Santa Teresa.

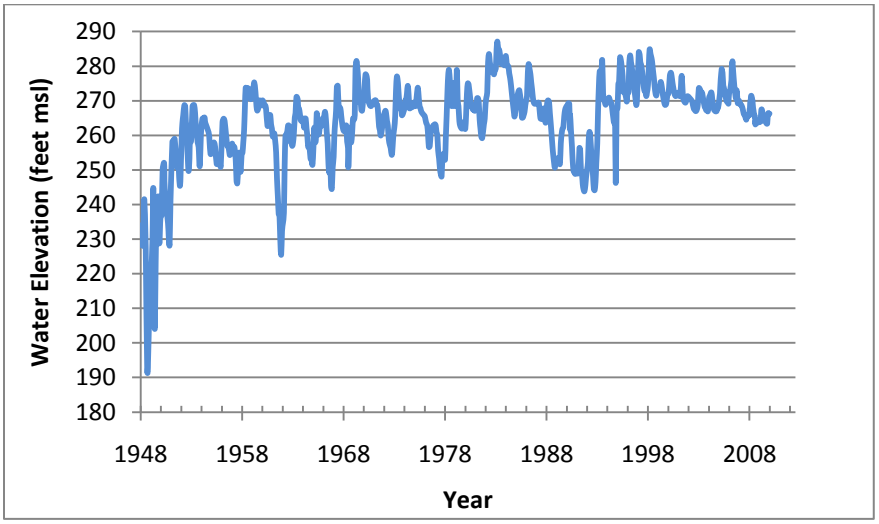
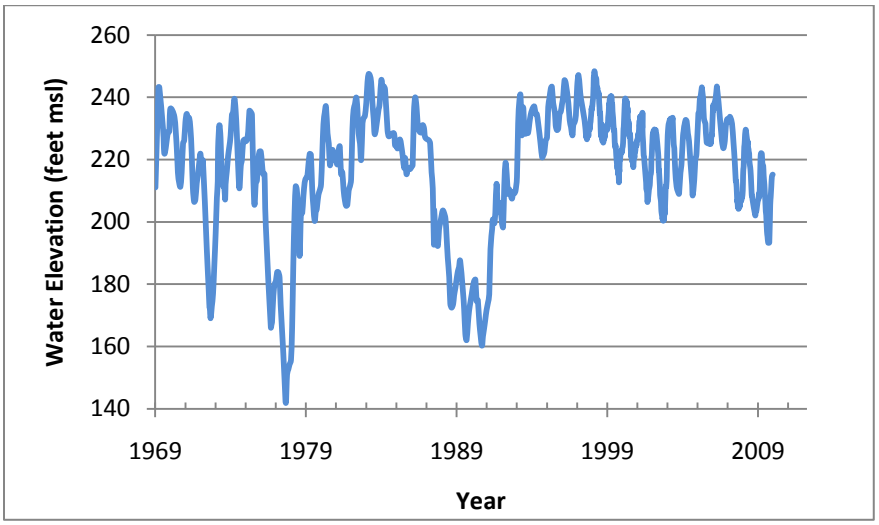


FIGURE 1-2.3 Historical Llagas Subbasin Groundwater Elevations, Index Well, 10S03E13D003. Well is in the vicinity of Church and Monterey Road.



1–3 Present Water Use and Water Requirements

On February 27, 2009, Governor Arnold Schwarzenegger proclaimed a statewide drought emergency and requested that all urban water users reduce their individual water use by 20 percent. In March 2009, based on information available at the time, district staff projected limited surface supplies from both imported and local sources, necessitating a reduced recharge program and greater reliance on drawing down dry-year groundwater reserves in order to meet 2009 water demands. The Board

adopted Resolution 09-25 calling for 15 percent mandatory conservation in response to a third consecutive dry year, court ordered pumping restrictions in the Delta, operational uncertainty and declining local reserves. The resolution was extended into late spring of 2010 in order to align with a more complete picture of the 2010 water supply outlook and annual water supply decision making.

The community responded well to the Board's call for conservation and exceeded the goal by reducing water use by 17 percent for the time period of March through November of 2009. The savings are relative to the corresponding months of calendar year 2004 water use and are normalized for population. Table 1-3.1 shows unadjusted historical water use in Santa Clara County and Table 1-3.2 shows a breakdown of groundwater production and managed recharge by water charge zone. Table 1-3.3 shows a historical summary of surface water supply, use and distribution for the last three years.

TABLE 1-3.1 Historical Water Use in Santa Clara County for Calendar Years 2007–2009

Historical Calendar Year Water Use	In Acre-feet		
	Actual 2007	Preliminary 2008	Estimated 2009[1]
Groundwater	168,920	169,360	156,000
Treated Water	131,420	125,050	111,000
District Raw Surface Water Deliveries	5,320	3,410	3,000
SFPUC Supplies to Local Retailers[2]	60,690	59,740	55,000
SJWC[3] **and Stanford Water Rights**	5,570	8,170	12,000
Recycled Water	16,910	16,880	15,000
Total Water Used in Santa Clara County	**388,830**	**382,610**	**352,000**

[1] Estimated 2009 use rounded to the nearest thousand
[2] San Francisco Public Utilities Commission supplies to 8 retailers and NASA-AMES
[3] San Jose Water Company

TABLE 1-3.2 Groundwater Production and Managed Recharge by Water Charge Zone

Charge Zone	Zone W-2					Zone W-5				
	Groundwater Production, acre-feet			Managed Recharge		Groundwater Production, acre-feet			Managed Recharge	
Year	Agricultural	Non-Agricultural	Zone Total	Zone Total Recharge, acre-feet	Managed Recharge as % Production	Agricultural	Non-Agricultural	Zone Total	Zone Total Recharge, acre-feet	Managed Recharge as % Production
1997	1,910	118,550	120,460	78,040	65%	32,746	21,710	54,456	32,120	59%
1998	1,101	99,210	100,310	66,670	66%	25,861	20,009	45,870	26,130	57%
1999	1,087	106,403	107,490	80,900	75%	29,144	23,767	52,910	26,500	50%
2000	972	112,399	113,371	88,400	78%	26,920	24,537	51,457	30,200	59%
2001	752	114,606	115,358	84,620	73%	28,510	25,437	53,947	32,040	59%
2002	707	103,952	104,659	71,660	68%	27,537	23,787	51,324	35,300	69%
2003	447	96,208	96,656	74,200	77%	25,964	24,256	50,220	35,000	70%
2004	579	105,137	105,716	66,700	63%	27,634	25,533	53,167	31,000	58%
2005	826	86,640	87,467	69,200	79%	25,458	25,237	50,695	32,500	64%
2006	429	82,195	82,624	65,770	80%	24,420	28,616	53,036	30,440	57%
2007	1,087	108,748	109,835	58,000	53%	27,660	31,424	59,084	33,410	57%
prelim. 2008	1,074	106,579	107,653	52,550	49%	28,183	33,520	61,703	35,700	58%
estim. 2009	900	96,700	97,600	65,470	67%	27,100	31,600	58,700	36,680	62%

TABLE 1-3.3 Historical Surface Water Supply, Use and Distribution for the Three Previous Calendar Years

			Calendar Year, in Acre-Feet		
			Actual 2007	**Preliminary 2008**	**Estimated 2009**
District Surface Water Supplies					
Local Surface Water					
	Net Inflow[1]		10,580	61,160	65,570
	Releases from (+) or additions to (-) surface water storage		20,640	-6,270	5,120
Imported Water					
	Prior year carryover		40,260	36,180	30,980
	Delta flood flows		4,840	0	0
	State Water Project contract allocation		60,000	35,000	40,000
	San Felipe Division contract allocation		114,050	110,740	81,310
	Semitropic water bank withdrawals		20,000	10,000	34,870
	Water transfers and exchanges		3570	18,450	19,320
	From water transfers and exchanges				
		returned to District from SFPUC[2] via intertie	0	290	320
Total District Surface Water Supplies:			**273,940**	**265,550**	**277,490**
Distribution of District Surface Water Supplies					
	To groundwater recharge				
		Santa Clara Subbasin	58,000	52,550	65,470
		Coyote Subbasin	14,690	14,170	14,110
		Llagas Subbasin	18,720	21,530	22,570
	To treated water		131,420	125,050	110,900
	To surface water irrigation		5,320	3,410	3,030
	To environment		3,920	10,550	12,020
	To Semitropic water bank		3,690	6,630	0
	To imported water carryover				
		Used by District	36,180	30,980	49,350
		Returned to SWP/CVP	0	680	0
	To water transfers and exchanges				
		returned to SFPUC via intertie	2,000	0	40
Total Distribution of District Surface Water Supplies:			**273,940**	**265,550**	**277,490**
Other Surface Water Supplies					
San Jose Water Co. & Stanford water rights			5,570	8,170	10,380
Recycled water (including District)			16,910	16,880	15,200
SFPUC deliveries to retailers incl. NASA-AMES			60,690	59,740	55,300
Total Other Surface Water Supplies			**83,170**	**84,790**	**80,880**
Total Managed Surface Water Supplies:			**357,110**	**350,340**	**358,370**

[1] Net inflow is the total inflow from all reservoirs minus evaporation

[2] San Francisco Public Utilities Commission

2010

2 Future Water Requirements and Water Supply Availability

2–1 Overview

As the water management agency and principal water wholesaler for Santa Clara County, the Santa Clara Valley Water District (district) is responsible for planning (in collaboration with San Francisco Public Utilities Commission [SFPUC] and local retailers) the water supply of the county to meet current and future demand.

Water supply reliability includes the availability of the water itself as well as the reliability and integrity of the infrastructure and systems that capture, store, transport, treat and distribute it. The district strives to meet water demand under all hydrologic conditions, including satisfying its treated water contracts for deliveries to the retail water suppliers. As the groundwater manager for the county, the district's goal is to ensure that an adequate groundwater reserve is available for the future.

Since water supplies available to the county are obtained from both local and imported sources, the district's water supply is a function of the amount of precipitation that falls both locally and in the watersheds of Northern California. The supply available is also a function of the facilities in place to manage the supply. Sources of water supply in northern Santa Clara County (North County) consist of locally developed and managed water, recycled water, water imported by the district via the State Water Project (SWP) and the federal Central Valley Project (CVP), as well as supplies to some of the retail water suppliers from the City and County of San Francisco's regional water system (Hetch Hetchy and Bay Area watersheds). Southern Santa Clara County (South County including Coyote and Llagas subbasins) is supplied by locally developed and managed water, recycled water, and CVP water.

2–2 Projected Future Water Supply Availability and Demand

Near Term Water Supply Availability

District staff begins preparing the district's Annual Water Supply Operations and Contingency Strategy for the upcoming calendar year in the fall of each year. The strategy is composed of several operations and water supply management scenarios that account for the probable range of water supply conditions that the district can expect in the upcoming year. These variable conditions include precipitation, both locally and in the Sierra, as well as imported supplies. Local precipitation and runoff impact our local reservoir storage, stream flow, and natural recharge of the groundwater subbasins. The quantity of precipitation in the Sierra and the timing of snowmelt impact the district's imported water supplies that are conveyed through the Sacramento-San Joaquin Delta. Other factors that impact the district's water supply include infrastructure and facility limitations; contractual obligations; and regulatory, institutional and legal constraints.

As described in section 1 of the report, it is uncertain whether 2010 will turn out to be a fourth consecutive dry year. As of the end of January 2010, statewide precipitation was at 104 percent of average and snowpack was at 117 percent of average to date. Storage at key statewide reservoirs was at 73 percent of average and about 50 percent of capacity.

The initial 2010 allocation of supply from the State Water Project (SWP) was at 5 percent, due to low carryover storage in the SWP reservoirs, 2010 SWP contractor demands, ongoing drought conditions and federally mandated environmental restrictions on water deliveries from the Sacramento-San Joaquin Delta to protect endangered fish species. Five percent is the lowest initial allocation percentage since the SWP began delivering water in 1967. The previous low for an initial allocation as a percentage of SWP contractors' requests was 10 percent in 1993. The initial 2009 allocation of 15 percent was increased to a final allocation of 40 percent in May. The historical average of final SWP allocations as a percentage of initial requests over the past ten years has been 68 percent.

Factors including statewide and local hydrologic conditions, imported water allocations from the SWP and federal Central Valley Project (CVP), the ability to bring in banked district supplies from Semitropic Water Storage District, potential low-point conditions at San Luis Reservoir, and planned facilities outages are incorporated into the development of the water supply operations contingency strategy. Table 2-2.1 reflects the probable range of local and imported surface water supplies the district currently expects in calendar year 2010. In conjunction with surface water supplies, groundwater reserves are managed to supplement available supplies during dry periods and to minimize water shortages. The strategy will be continuously updated throughout the year to account for operations to-date and real-time conditions.

TABLE 2-2.1 Projected Calendar Year 2010 Range of Surface Water Supply

	Projected Calendar Year 2010 Supply in Acre-feet	
	Average Year	Dry Year
Imported Water	100,000 - 153,000	70,000 - 81,000
Local Surface Water	79,000	49,000
Total	179,000 - 232,000	119,000 - 130,000

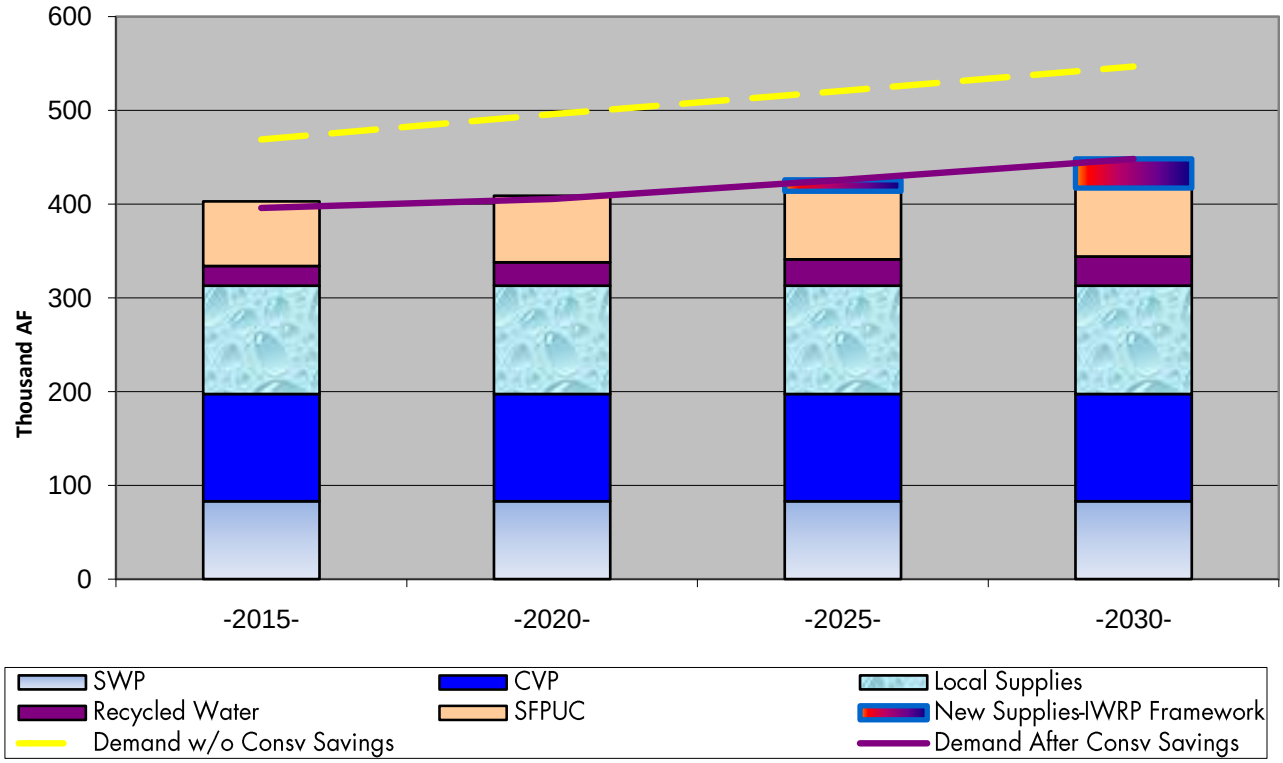
Long-Term Projected Demand and Water Supply

The Association of Bay Area Governments (ABAG 2009) projects that the population of the county will increase to 2,431,300 by the year 2035, almost a 32 percent increase over the year 2008 population. This increasing population and projected significant job growth will increase demand for water. Overall, countywide water demand is projected to increase by about 70,000 acre-feet or 18 percent over the next 25 years, even with increases in new water conservation efforts. The district and most major retail water suppliers partner in regional implementation of a variety of water use efficiency programs to permanently reduce water use in the county. As shown in Figure 2-2.1, the 2030 demand in normal years with conservation programs in place is projected to be approximately 450,000 acre-feet. The conservation efforts planned between now and 2030 are anticipated to offset over half of the additional water supplies needed to meet increased demand.

The water supplies depicted in Figures 2-2.1 and 2-2.2 reflect historical assumptions and conditions contained in the preparation of the 2005 Urban Water Management Plan (UWMP). Since then, imported water deliveries from the SWP and CVP have been negatively impacted by significant restrictions on Delta pumping required by the biological opinions issued by the U.S. Fish and Wildlife Service (December 2008) and National Marine Fisheries Service (June 2009), as well as altered hydrologic conditions due to climate change.

In the draft 2009 SWP delivery reliability report, issued on January 26, 2010, there are greater reductions in water deliveries on average when compared to previous reports issued in 2005 and 2007. The average annual SWP delivery is at 60 percent for current and projected future conditions. Over multiple-year dry periods, the average annual SWP delivery is around 35 percent. In addition to the impact of reduced annual supplies, the district could sustain cumulative impacts from reduced supplies in the average and wetter years that historically were available for the district to store either locally or out-of-county as reserves for the drier years. These updated imported water delivery estimates will be incorporated into the 2010 UWMP.

FIGURE 2-2.1 Santa Clara County – 2005 UWMP Supply & Demand Comparison, Normal Year (1985)

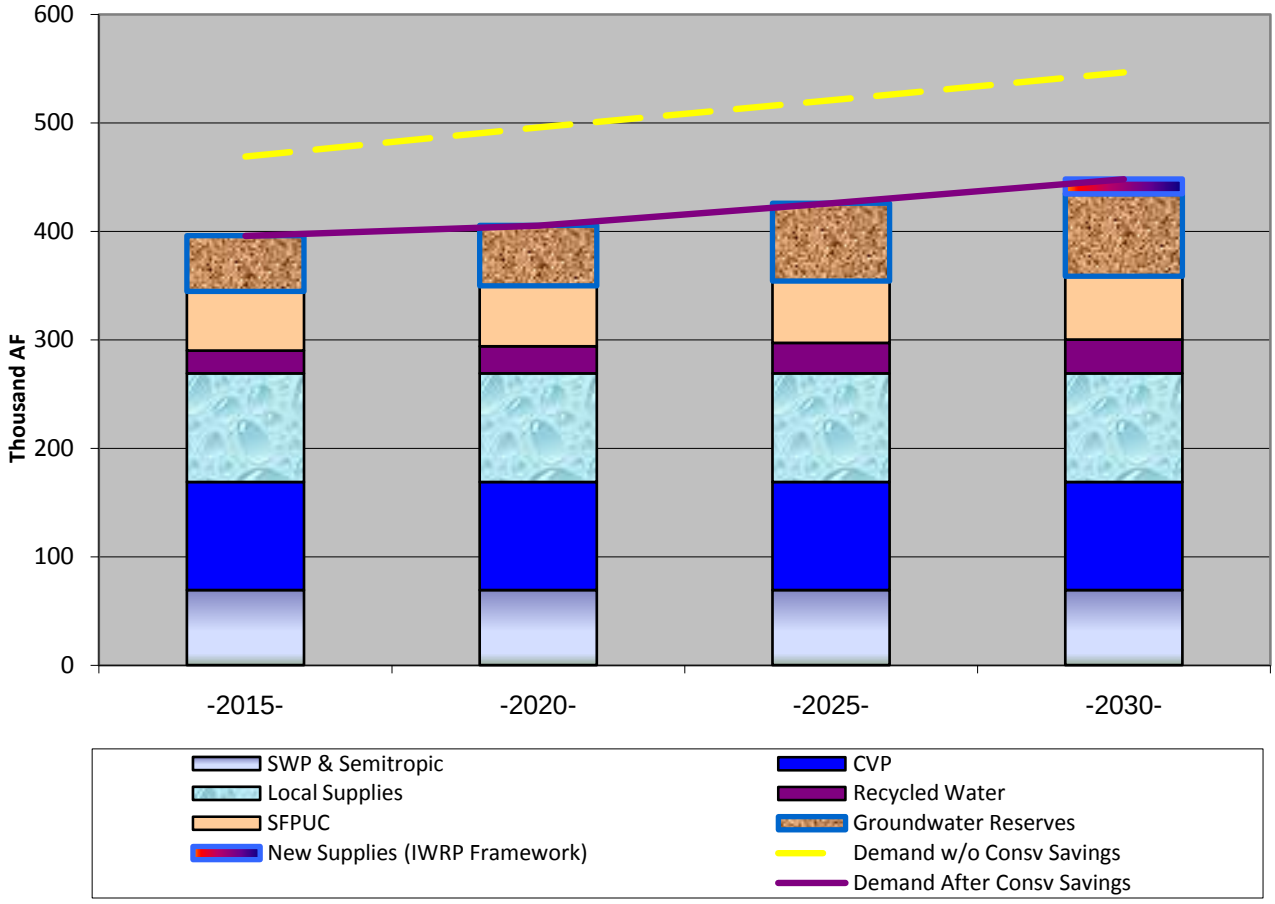


Notes:
(1) This analysis uses a specific year (normal year) to approximate average supplies and to identify the normal year shortage, if any.
(2) The selection of a "normal year" was required for the UWMP 2005 and does not match the average year for all supply sources, but was the "best fit" for the hydrologic years included in the modeling analysis (1967–1994). Therefore indicated shortage quantities would be different for average supplies.
(3) Recycled water projections based on estimates provided by county recycled water producers during the preparation of UWMP 2005.
(4) Assumes SFPUC's Regional Water Supply Improvement Program will be completed by 2015.
(5) Includes standard conservation (no washer program), additional 28K Integrated Water Resources Planning (IWRP) Study 2003 "No Regrets" conservation building block.

(6) Imported supplies from SWP and CVP will be less than quantities shown in the 2005 UWMP and in this chart.

District modeling results indicate that the county's water supply system is more vulnerable to successive dry years, such as those that occurred in 1928–1934 and 1987–1992, which deplete water storage reserves in local and state reservoirs and in the groundwater subbasins. In wet years, the district stores surplus supplies for use during drought periods. Supplies in excess of demand are stored in the groundwater subbasins and/or banked outside the county at Semitropic Water Storage District. This operational strategy is limited by groundwater subbasins' recharge capacity, distribution system capacity, and various contractual and infrastructure restrictions. Figure 2-2.2 compares long-term supply and demand for multiple dry years, under the 2005 UWMP assumptions. As mentioned previously, imported supplies under multiple dry years have been decreased since 2005.

FIGURE 2-2.2 Santa Clara County – 2005 UWMP Supply & Demand Comparison, Multiple Dry Year Average (1987–1992)



Notes:
(1) Multiple dry year scenario analysis is useful in the evaluation of carryover storage.
(2) Depicted supplies are the average annual available over the dry year period indicated. The volume of groundwater reserves shown is the average annual reduction in groundwater reserves over the 6 year multiple year dry period.
(3) In dry and multiple dry years, the use of groundwater reserves and the potential shortage is highly dependent on the assumed initial groundwater storage at the beginning of the model run and/or the hydrologic sequence used in the model (1967–1994 for the UWMP 2005). This analysis assumes groundwater basins are 75 percent "full" and assumes complete utilization of groundwater operational storage. North County and South County operational storages of 350KAF and 180KAF, respectively, were used in this analysis.
(4) Recycled water projections based on estimates provided by county recycled water producers during the preparation of UWMP 2005.

(5) Assumes San Francisco Public Utilities Commission's (SFPUC) Regional Water Supply Improvement Program will be completed by 2015.
(6) Includes standard conservation (no washer program), additional 28K IWRP Study 2003 "No Regrets" conservation building block.
(7) Analysis does not included increases in demand associated with dry years. Preliminary estimates suggest that dry year demands (before any voluntary or mandatory conservation) could be approximately 5-7 percent higher than those shown in the chart.
(8) Assumes storage in Semitropic water bank is adequate to take water over the multiple year dry period.
(9) Assumes no additional imported supplies are secured through transfer, spot market or options.
(10) Based on modeling performed for the UWMP 2005 and includes a Semitropic participation level of 258KAF. Current participation level is 350 KAF which would result in higher Semitropic take and a lower calculated shortage.
(11) Chart shows the average annual shortage over the 6 year multiple dry year sequence.
(12) Imported supplies from SWP and CVP will be less than quantities shown in the 2005 UWMP and in this chart.

2–3 Conclusions, Findings and Challenges to Future Water Supply Availability

The district updates its Urban Water Management Plan (UWMP) every five years in compliance with the California Urban Water Management Planning Act. The 2005 UWMP concluded that the district cannot meet demands through 2030 without significant investments to protect and augment the district's current mix of water supplies. New restrictions on pumping from the Delta, local storage, and operational constraints, combined with continued increases in water demands, further emphasize the need for additional investments to protect and augment supplies. Investments are necessary to protect existing water supply sources and infrastructure. In addition, the district also must make investments in a mix of new all-weather supplies, storage, dry-year transfers or option agreements and maximize opportunities for water conservation.

Hydrologic, institutional and regulatory risks and uncertainties influence the projections of both local and imported water supplies and the anticipated reliability of those supplies. The district identified and analyzed risks and uncertainties as part of the Integrated Water Resources Planning (IWRP) Study – 2003. Risks evaluated include random occurrences of hazards and extreme events, climate change, more stringent water quality standards, fisheries protection measures, no expanded capacity of the SWP Banks pumping plant, and demand growth greater than projected. Results of this analysis indicated that Delta levee failure risk and climate change are among the district's top risks to water supply. Some of the risks and uncertainties have come to pass.

Projected imported supplies have decreased since the analysis performed for the UWMP 2005 as a result of actions to protect fisheries in the Delta and the consequences of climate change. In response to the trend of Delta ecosystem decline and reduced water supply reliability, the district and other CVP and SWP contractors are working with state and federal agencies to develop a comprehensive Bay-Delta Conservation Plan (BDCP). The Department of Water Resources is also undertaking the Delta Habitat Conservation and Conveyance Program (DHCCP), a collaborative state-federal planning effort that will produce the Environmental Impact Report/Environmental Impact Statement (EIR/EIS) for implementation of the BDCP. Both the draft conservation plan and EIR/EIS are expected to be released for public review by the end of 2010.

The district manages and addresses risks and uncertainties by building and maintaining a diversified portfolio of water supply sources and programs. This portfolio of existing supplies and new water supply investments is intended to meet at least 95 percent of future water demands. This portfolio will

be reviewed and updated in a Water Supply and Infrastructure Master Plan scheduled for completion in 2012.

The major challenge to future water supply availability is how best to protect and augment existing water supply assets such as groundwater and surface water resources and the built infrastructure. The district needs to continue to be vigilant in protecting the groundwater basin from overdraft and contamination, mitigating the diminishing imported and local supplies and maintaining and replacing the aging water supply infrastructure.

2010

3 Programs to Sustain Supply Reliability

3–1 Activities to Protect and Augment Water Supplies of the District

In June 2009, the district's Board of Directors (board) adopted groundwater production charges and a treated water surcharge to finance a program of activities to protect and augment water supplies of the district. The program, to be undertaken in fiscal year FY 2009–10, is comprised of activities and service functions in the areas of operations, maintenance and construction, as illustrated in Table 3-1.1. These activities are designed to work together to meet board-adopted end goals and policies as well as to provide benefits to the community.

TABLE 3-1.1 Program Activities to Manage and Provide a Sustainable Water Supply

Inputs	Activities to Protect & Augment Water Supplies		End Goals & Benefits From Services Provided
		Services and Functions	
• Sources of Water Supplies • Revenue from groundwater production charges & other sources of funding	Operation	• Planning & development • Water purchases • Transmission • Treatment • Distribution • Storage • Recharge • Conservation, water recycling & desalination • Mitigation	• Meet or exceed water quality standards • Reliable supply to meet current demands • Reliable supply to meet future demands • Diversified supply sources • Protect and sustain water resources • Expand water recycling • Maximize water conservation • Mitigate impacts
	Maintenance	• Surface & ground water resources protection & management • Asset protection & management	
	Construction	• Capital improvement • Infrastructure management	

The FY 2009–10 groundwater production charges were established in accordance with the FY 2009–10 budget[1] approved by the board. The groundwater production charges were the same as those

[1] The budget document is available on the district website: www.valleywater.org

adopted in the previous year and reflected further cuts in internal costs and operational changes to constrain costs and streamline business operations.

As of the close of the second quarter of FY 2009–10, most of the Water Utility operations programs are on track in meeting annual milestones towards providing a clean, safe and reliable water supply that meets current and future demands. In particular, the district successfully managed the shutdown of West Pipeline for much-needed inspection and repairs, as well as maintenance and repair of major pipelines and pumping facilities. There are delays, however, in securing environmental clearances in the dam maintenance Environmental Impact Report project as well as in the Habitat Conservation Plan (HCP) and Fisheries and Aquatic Habitat Collaborative Effort (FAHCE).

As described in Section 4 of this report, the recommended FY 2010–11 charges reflect no increase in groundwater production charges. If adopted, this would mean a second straight year with no increases, as the district did not raise its charges in FY 2009–10 despite increasing costs and reduced revenue associated with less water usage. Instead, the district eliminated positions, deferred projects and cut costs throughout the agency to hold the charges at 2008–09 levels and will continue to look for additional cuts for the FY 2010–11 budget process.

Because of the district's sound water supply investments in the past and prudent measures taken to address challenges, the district is able to weather well through three consecutive drought years of drastic reductions in imported and local supplies. The district continues to maximize conservation and recycling, protect groundwater resources and existing supplies and infrastructure, as well as to plan and develop long-term supplies to meet future demands.

3–2 Future Capital Improvement, Operating and Maintenance Requirements

For FY 2010–11 as well as the decades ahead, the highest priority work of the district's Water Utility is to implement a program of activities to ensure that water supplies are diversified and reliable to meet current and future demands, local groundwater supplies are well managed, and that treated water quality standards are met. This program of operations, maintenance and capital improvement activities will require continued funding from groundwater production charges and other sources of revenue, as described in Section 4 of this report.

The proposed FY 2010–11 operations and capital programs, as shown in Tables 4-3.1 and 4-3.2, continue to emphasize activities to protect and maintain existing water supplies and assets and to plan for contingencies due to both hydrologic uncertainties and regulatory restrictions on imported and local supplies. The proposed programs, if funded accordingly, will enable the Water Utility to supply expected demands in the next year as well as to work towards a reliable supply for the future. Nevertheless, a number of needed work items in asset protection and management will continue to be deferred due to incomplete technical information or insufficient financial resources. For instance, the district is currently undertaking studies to investigate the extent of risks and to develop alternatives in seismic improvements at Anderson and other dams. The real costs of seismic improvements and retrofits are unknown until these studies are first completed.

Another unknown is the water supply and financial costs to implement the Three Creeks Habitat Conservation Plan (Three Creeks HCP) and Santa Clara Valley Habitat Plan (Valley HP). The Three Creeks HCP grew out of the 1996 water rights complaint and subsequent Fish and Aquatic Habitat Collaborative Effort (FAHCE). The resource agencies including: National Marine Fisheries Service, United States Fish and Wildlife Service and Department of Fish and Game, requested the Three Creeks HCP to be expanded to include all surface water operations, dam maintenance and seismic safety in Stevens and Coyote creeks and Guadalupe River.

The Valley HP is a separate joint effort with the county, the Valley Transportation Authority and the cities of San Jose, Morgan Hill and Gilroy, for the purpose of creating a conservation plan for the parts of the Guadalupe and Coyote waterways within San Jose, and the parts of the Pajaro watershed within the county. Together, the two plans, if approved and implemented, will provide the district with 50 years of incidental "take" coverage pursuant to the federal and state Endangered Species acts for 29 listed species for the district's water supply and flood control functions. However, negotiations among the parties during December 2009 and January 2010 were moving towards deleting fish, namely steelhead and salmon, as a covered species in the Valley HP. In north county, the district would still receive fish permit coverage through the Three Creeks HCP. In south county, fish coverage would need to be developed through an evaluation of several mechanisms available to the district. Nevertheless, implementation of both HCPs will be a large financial burden on the district for the decades to come.

The proposed FY 2010–11 programs also do not account for unanticipated cost increases or revenue cutbacks. If revenue from the groundwater production charges is reduced or eliminated, then district administrative and operational activities dependent on this revenue would need to be drastically reduced or eliminated to reduce costs. Programs subject to reduction and/or elimination include: groundwater replenishment activities, operation, maintenance and construction of water supply facilities such as dams, reservoirs, conveyance and recharge facilities, conjunctive use and water use efficiency programs such as conservation and recycling, purchase of imported water and management of banked supplies, programs to monitor and protect surface and groundwater resources, as well as all the associated program support activities. There is minimal flexibility in revenue replacement through re-allocation of other district funds, since the disposition of most district funds are restricted to their respective designated purposes.

If this scenario of loss of groundwater revenue and resultant reduction in program services were to occur, groundwater levels would drop drastically due to the lack of the district's managed recharge program. In north county, a sustained drop in groundwater levels could result in the re-initiation of land subsidence and the resultant damage to infrastructure. In south county, where groundwater is the primary source of supply, a precipitous drop in groundwater levels could result in groundwater wells running dry. Overall, water supply would be insufficient to meet current and future demand. The economic, social and environmental viability of Santa Clara County cannot be sustained under such a scenario.

2010

4 Financial Outlook of Water Utility System

4–1 Introduction

This section summarizes the recommended charges for FY 2010–11 and the multi-year financial analysis that serves as the foundation for the recommended groundwater production charges in each zone. The major sources of revenue for the Water Utility are from the imposition of charges on groundwater production and from contracts for the sale of treated surface water produced by its three treatment plants. The district also receives revenue from property tax, interest earnings, grants, capital reimbursements and other sources. The district assesses the need for groundwater production charges annually and, in accordance with state law, prepares this report to describe the activities undertaken to provide a water supply, along with the associated capital, maintenance, and operating requirements.

The Rate Setting Process

According to Section 26.3 of the District Act, proceeds from groundwater production charges can be used for the following purposes:

1. Pay for construction, operation and maintenance of imported water facilities
2. Pay for imported water purchases
3. Pay for constructing, maintaining and operating facilities which will conserve or distribute water including facilities for groundwater recharge, surface distribution, and purification and treatment
4. Pay for debt incurred for purposes 1, 2 and 3.

This year, as in past years, staff has carefully evaluated the activities that can be paid for by groundwater production charges. The work of the district is divided into projects and every project manager prepares a project plan. The project plan is a detailed description of a project including objectives, milestones, and an estimate of resources needed to deliver the project. Each project plan contains a justification as to whether or not groundwater production charges can be used. The financial analysis presented in this report complies with the District Act.

Resolution 99-21 guides staff in the development of the overall pricing structure based on principles established in 1971. The general approach is to charge the recipients of the various benefits for the benefits received. More specifically, pricing is structured to manage surface water, groundwater supplies and recycled water conjunctively to prevent the over use or under use of the groundwater basin. Consequently staff is very careful to recommend pricing for groundwater production charges, treated water charges, surface water charges and recycled water charges that work in concert to achieve the effective use of available resources.

This year's rate setting process will be conducted consistent with Proposition 218 although the applicability of Proposition 218 to the groundwater production charge has yet to be finally determined by the courts. In an effort to be more transparent and formalize the well owners' ability to engage in the rate setting process, staff has prepared a "cost of service" analysis by customer class and has implemented a formal protest procedure. As in the past, the board will continue to hold public hearings and seek input from its advisory committees and the public before rendering a final decision on groundwater production charges for FY 2010–11.

This year, the district engaged Raftelis Financial Consultants, Inc. (RFC) to review the district's cost of service and rate setting methodology used to calculate groundwater production charges for fiscal year (FY) 2010–11. Specifically, RFC reviewed the cost of service and financial planning model developed by the district to calculate groundwater production charges for FY 2010–11. RFC reviewed the district's rate setting methodology for consistency with industry standards, best practices, and legal considerations such as Proposition 218, the District Act, and Resolution 99-21. The methodology used to calculate groundwater production charges for FY 2010–11 is detailed in RFC's report titled "Review of the Santa Clara Valley Water District's Cost of Service and Rate Setting Methodology for Setting FY 2011 Groundwater Production Charges". The report demonstrates that the district developed groundwater production charges consistent with cost of service principles and legal considerations including Proposition 218, the District Act, and Resolution 99-21.

RFC has conducted over 600 rate and financial planning studies for water and wastewater utilities across the country. RFC's senior level consultants have over 150 years of cumulative experience in the water and wastewater industry and are active members of both national and local industry associations such as the American Water Works Association and the Water Environment Federation.

The Groundwater Production Charge Recommendation for Fiscal Year 2010–11

Last year, FY 2009–10, the board chose to hold groundwater production charges flat in both zones of benefit. In the North County, the board adopted a $520 per acre-foot groundwater production charge for non-agricultural water, $16.50 per acre-foot for agricultural water, and $620 per acre-foot for contract treated water. In the South County, the board adopted a $275 per acre-foot groundwater production charge for non-agricultural water, and $16.50 per acre-foot groundwater production charge for agricultural water. To accomplish this, 57 positions have been eliminated district-wide over the past two years, temporary staff and overtime have been reduced significantly, fleet vehicles have been reduced by 25, and some projects have been canceled or delayed.

This year, staff recommends no change to the groundwater production charges. Charges would remain unchanged for a third consecutive year. Many water agencies across California will likely see a second year of double digit increases for FY 2010–11; however, district staff is committed to do more with less.

Figure 4-1.1 illustrates the multi-year groundwater production charge projection. It reflects a range of potential groundwater production charges over the next ten years depending on the level of service to be provided. The high end of the range represents the groundwater production charges required to fund all of

the operations and capital projects identified by staff to meet the board's Ends Policies over the next few years. The potential impacts of not funding the high end of the range include increased risk of (1) service interruptions, (2) higher corrective maintenance costs to repair facilities that have not been well maintained and (3) reduced ability to respond to drought. While staff has identified as many projects as possible, there are initiatives and/or potential future uncertainties that could result in the identification of additional capital or operations projects that are not reflected in the high end of the range.

The lower end of the range represents staff's recommended groundwater production charges for FY 2010–11 and the corresponding future trajectory based on the assumption that operating services will continue at the level budgeted in FY 2009–10.

Figure 4-1.1 Ten Year Projection

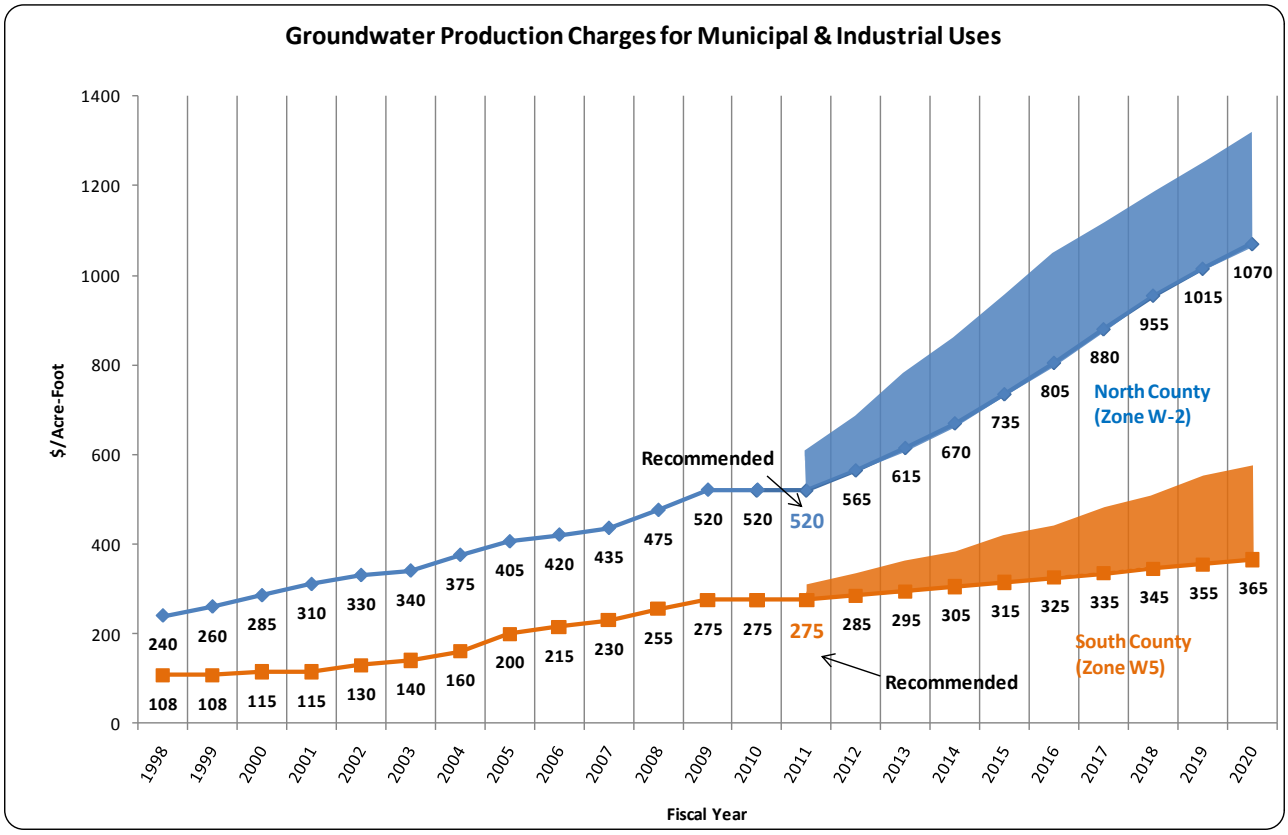


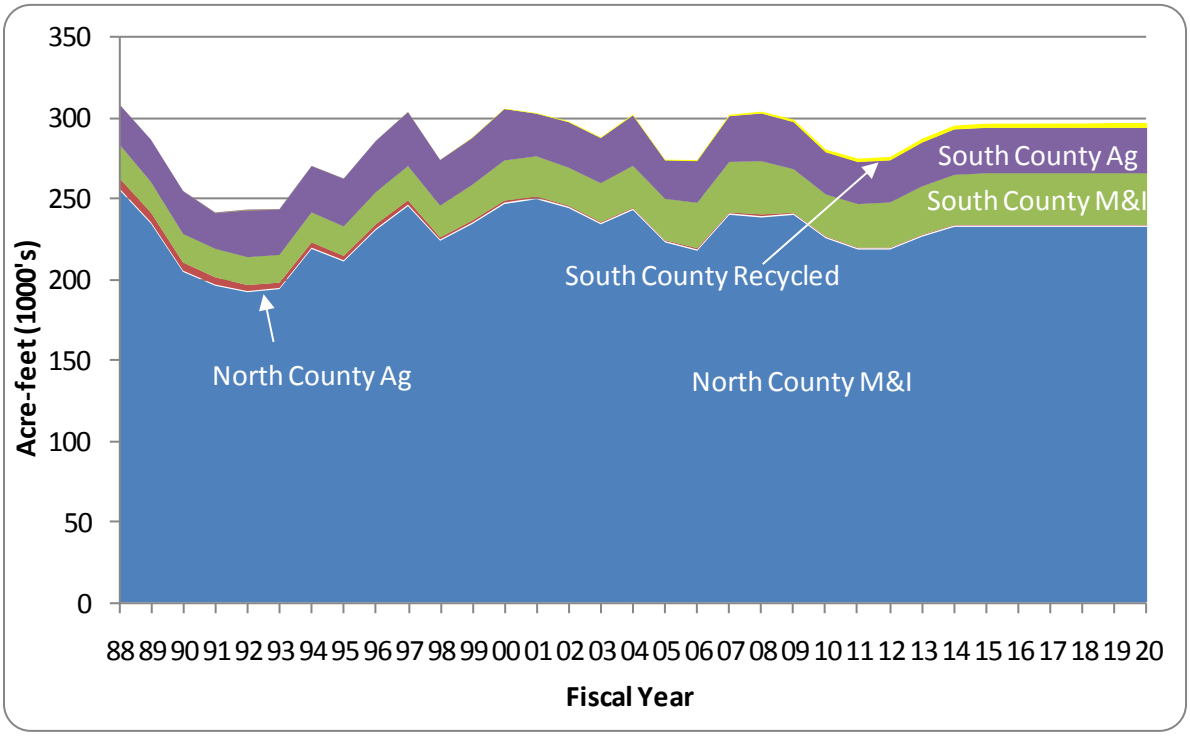
Table 4-1.1 shows groundwater production and other charges in fiscal years 2008–09 and 2009–10. The final column contains the recommended groundwater production charges for FY 2010–11, which are in accordance with the pricing policy described in Resolution 99-21.

Table 4-1.1 Summary of Charges (Dollars Per Acre-Foot, $/AF)

	Dollars Per Acre Foot		
	FY 2008-09	**FY 2009-10**	**Recommended FY 2010-11**
Zone W-2 (North County)			
Groundwater Production Charge			
Municipal & Industrial	520.00	520.00	**520.00**
Agricultural	16.50	16.50	**16.50**
Zone W-5 (South County)			
Groundwater Production Charge			
Municipal & Industrial	275.00	275.00	**275.00**
Agricultural	16.50	16.50	**16.50**
Recycled Water Charges			
Municipal & Industrial	275.00	275.00	**275.00**
Agricultural	41.50	41.50	**41.50**
Zone W-2 (North County)			
Basic User Charge	520.00	520.00	**520.00**
Treated Water Surcharge			
Contract	100.00	100.00	**100.00**
Non-contract	100.00	150.00	**50.00**
Total Treated Water Contract Charge	620.00	620.00	**620.00**
Total Treated Water Non-contract Charge	620.00	670.00	**570.00**

Figure 4-1.2 illustrates historical and projected water use, which is a key driver of the district's water revenue. The projected water use for FY 2010–11 is based on the 2005 Urban Water Management Plan but adjusted downward for the Board's call for 15 percent mandatory conservation. For the next two years, the total district water use projection has been reduced by 25,000 acre-feet to 275,000 acre-feet per year. In FY 2012–13, water use is projected to ramp up to roughly 287,000 acre-feet. By FY 2013–14, the water use projection assumes a return to near pre-drought usage of roughly 295,000 acre-feet.

Figure 4-1.2 Historical and Projected Water Use



Financial Overview of the District

The water district uses fund accounting to ensure and demonstrate compliance with finance-related legal requirements. Fund accounting allows government resources to be segregated and accounted for according to their intended purposes. Accounts related to activities of the Water Utility have been segregated into one fund. Revenue accounts include groundwater production, treated water, property taxes, interest earnings, reimbursements, grants and other. Cost accounts include both direct and indirect costs associated with Water Utility projects and activities. Table 4-1.2 shows an overview of the funds at the district including the Water Utility Fund and the estimated revenues, costs and reserves for FY 2010–11 for each fund.

Table 4-1.2 FY 2010–11 Projected Funds Analysis

(Thousands $)	Water Utility Fund	Watershed Funds	Administration Funds
Revenue[1]	169,343	157,767	5,400
Interfund Transfer	348	(348)	-
Ops Costs & Xfers	(129,052)	(53,186)	(58,000)
Debt Svc	(16,413)	(15,651)	(800)
Capital	(52,207)	(62,418)	(5,400)
Debt Proceeds	21,346	-	-
Intra-District Reimb.[2]	-	-	51,900
Balance	**(6,635)**	**26,164**	**(6,900)**
Reserves			
Restricted	22,909	79,918	-
Designated	32,489	54,201	7,000
Designated Liability	5,930	-	13,100
Total Reserves	**61,328**	**134,119**	**20,100**

Notes:

1) Watershed revenue includes $51.9M of capital reimbursements

2) Intra-District Reimbursements represent overhead costs that have been allocated to the Water Utility & Watersheds (included in the operations and capital costs for those funds)

The Watershed Funds are a segregated grouping of funds with separate funding sources (including Benefit Assessments, 1 percent ad valorem property taxes and a special tax) for the purpose of providing flood protection and watershed management. The Administration Funds include the General Fund, the Equipment Fund and the Risk Fund to account for all revenues and expenditures necessary to carry out basic governmental activities of the district that are not accounted for through other funds. Administration Funds expenditures that are not offset by Administration Funds revenues are allocated to the Water Utility and Watershed funds through an overhead rate at the project level.

4–2 Water Utility Finances for Fiscal Years 2008–09 & 2009–10

Fiscal Year 2008–09

Actual overall revenue for FY 2008–09 was $5.2 million less than the adopted budget. This shortfall was due primarily to lower water usage which equated to $8.4 million reduced water charge revenue. It was also due to $1.9 million of delayed capital reimbursement revenue. These shortfalls were offset by $4.3 million greater than anticipated interest earnings.

Actual operations outlays were $4.2 million lower than adjusted budget. This was driven by lower than anticipated costs to take banked water by taking advantage of banking capacity operations and maintenance credits.

Unspent capital budget was carried forward to FY 2009–10 consistent with accounting practices. Several capital projects were closed resulting in $18.5 million worth of budget balance remaining moving to operating and capital reserve.

Fiscal Year 2009–10

Current estimates on FY 2009–10 show revenue trending at approximately $5 million below budget. This is due primarily to water usage trending below anticipated levels.

4–3 Overview of Operating and Long-term Capital Plans

To develop a charge structure that will support planned work, staff analyzes the immediate needs of the district as well as anticipated requirements in the years to come.

Operating Outlays

Operations costs are projected to increase at an average of 4.3 percent per year over the next ten years. This increase is driven mainly by anticipated inflation.

Table 4-3.1 shows the district's Water Utility operating program for FY 2008–09, FY 2009–10, and projected for FY 2010–11. The Water Utility Enterprise strives to implement a program that ensures that treated water quality standards are met and that water supplies are able to meet current and future demand.

Table 4-3.1 Operating Budget Summary

Program	Cost Category	Thousands $ Actual FY 09	Adjusted FY 10	Projected FY 11	Description of Activities
Groundwater Management	Groundwater Management	7,936	6,583	6,942	Operate & maintain recharge ponds, canals, pipelines & diversions including vegetation management, groundwater level & quality monitoring, groundwater modeling, subsidence data collection & analysis, groundwater recharge reuse, groundwater recharge evaluation
Treated Water Ops & Maint	Treatment Plant Operations & Maintenance	27,816	24,301	24,391	Operate & maintain 3 water treatment plants
	Drinking Water Quality	6,199	4,995	5,242	Water District laboratory operations, water quality planning, testing, research, and reporting
	Treated Water Transmission & Distribution	3,671	1,383	2,520	Maintain & operate treated water transmission and distribution system
Water Supply	Water Supply Acquisition & Storage	9,067	11,805	7,386	Dams and reservoir operations & maintenance, water banking program, imported water supply management, long-term Delta issues resolution
	Imported Water Purchases	42,341	38,972	40,667	Imported water purchases
	Raw Water Transmission & Distribution	10,307	6,118	6,298	Operate & maintain raw water distribution system, including mechanical, electrical and SCADA
Water Supply Planning	Short-Term Water Supply Planning and operations	1,358	926	1,043	Data collection & analysis, water supply conditions analysis, operations planning, shortage contingency planning & implementation, operating policies and procedures
	Water Supply System Sustainability	1,155	895	967	Water rights protection, disaster planning, asset protection
	Long-term Water Supply Planning	3,730	3,044	3,434	Integrated Water Resources Plan, Urban Water Management Plan, infrastructure master planning, integrated regional water management plan, water system computer modeling
Recycling & Conservation	Water Recycling	3,018	1,676	1,892	Administer agreements, planning, technical studies, recycled water rebates
	Water Desalination	-	-	-	regional desalination project, salinity management
	Water Conservation	8,735	8,804	8,859	Technical assistance, financial incentives, outreach and education, program development
Natural Resource Protection	Resource Protection	3,816	2,689	3,044	Environmental planning & compliance, well permitting and destruction, biodiversity monitoring
	Mitigations to Protect Natural Resources	2,302	1,887	1,933	Environmental compliance support, habitat conservation and mitigation commitments, urban runoff polution prevention
	Climate Change Mitigation and Adaptation	144	113	138	Programs and activities to mitigate climate change impacts and plan for adaptation strategies
Support Services	Water Utility Business Services	12,199	12,771	12,723	General & division management; performance measures; non-project related unit management; communications; financial support & water charge setting; public outreach; health and safety training; billing, data maintenance, auditing; meter reading, testing, repair, installation, backflow prevention
	Strategic Support Services	1,443	1,856	1,572	Emergency services, warehouse and equipment services, real estate services, ethics & diversity
Other	Operating cost reductions/Other adjustments	(6,806)	-	-	Operating cost reductions or adjustments
	Total Program Requirements	**138,431**	**128,818**	**129,051**	

Capital Improvement Plans

The district constructs and maintains reservoirs, pipelines, recharge ponds, and water treatment plants that are needed to achieve the board's Ends Policies. On an annual basis, the district conducts a process to plan for capital improvements and identify the resource needs and financial constraints to implement the projects. The result of this process is board approval of a 5-Year Capital Improvement Plan (CIP)[1].

[1] The latest CIP can be accessed at www.valleywater.org/Programs/CapitalImprovementProgram.aspx.

Table 4-3.2 shows the capital projects identified in a preliminary version of the FY 2010–11 CIP and associated expenditures for the next ten fiscal years. The table shows funding $843.8 million (inflated) worth of capital projects between FY 2010–11 and FY 2019–20. A large portion of the capital program is dedicated to asset management of Water Utility Enterprise facilities throughout the county and is based on a program that was started in January 2002 to provide a better basis for identifying long-term capital rehabilitation and replacement needs.

Table 4-3.2 Capital Improvement Projects – Fiscal Years 2010–11Through 2019–20

	Planned Funding with Inflation (In Thousands $)						
Capital Project	**FY11**	**FY12**	**FY13**	**FY14**	**FY15**	**FY 16-20**	**Total 11-20**
SOURCE OF SUPPLY							
Dam Instrumentation*						6,628	**6,628**
Dam Maintenance Mitigation*	83						**83**
Dam Safety Program Seismic Stability Evaluation*	1,240	10,933	15,885	7,396	80,405	11,752	**127,611**
Recycled Water Masterplan - Short-Term Implementation*	4,863	147					**5,010**
Water Efficient Demonstration Garden		86	59				**145**
Recycled Water Advanced Treatment Facility WPCP	8,764	8,605	91				**17,460**
Pacheco Pumping Plant Regulating Tank Recoating*	20						**20**
San Felipe Communications Cable Replacement*	916	500					**1,416**
Small Capital Improvements, San Felipe*	2,065	1,176	188	747	259	4,607	**9,042**
Almaden Dam Outlet Works Improvements		772	806	840	1,164	12,442	**16,024**
Jacques Gulch Restoration	141	112	96	34	54		**437**
Calero/Fellows Dike Improvement	124	6,697	545				**7,366**
Pacheco Pumping Plant ASD Replacement*	6,606	1,077	1,021				**8,704**
Central Valley Project Capital Payments*	6,894	7,137	7,389	7,650	7,920	46,026	**83,015**
Source of Supply Subtotal	**31,715**	**37,242**	**26,080**	**16,667**	**89,802**	**81,455**	**282,961**
TREATED WATER TRANSMISSION & DISTRIBUTION							
Water Protection*		304					**304**
Microwave Telecommunications System*	63	22					**85**
East Pipeline Rehab, Aborn Turnout to Milpitas PL	1,415	769					**2,184**
Small Capital Improvements, Treated Water Transmission	733	1,528	1,103	407	451	3,218	**7,440**
IRP2 Additional Line Valves					762	8,337	**9,099**
IRP2 Well Fields	300	6,114	5,760	6,008	30,321	30,646	**79,149**
Treated Water Transmission & Distribution Subtotal	**2,511**	**8,737**	**6,863**	**6,415**	**31,534**	**42,201**	**98,261**
ADMINISTRATION & GENERAL							
Radio Repeater System Infill - 47%*	8	188					**196**
Workforce and Knowledge Development - CPSD*	359	429	465	499	522	1,864	**4,137**
Quality Management-CPSD*	80	93	98	83	113	538	**1,004**
CIP Development & Admin - CPSD*	396	472	512	550	575	2,053	**4,557**
CPSD Management & Support*	2,804	3,287	3,451	2,913	3,971	18,986	**35,412**
CPS Process Improvement*	199	237	257	276	289	1,031	**2,289**
Technical Review Committee*	257	306	332	357	373	1,331	**2,956**
Pipeline Hydraulic Reliability Upgrades - Planning*	136	148					**284**
Administration & General Subtotal	**4,238**	**5,161**	**5,115**	**4,677**	**5,841**	**25,803**	**50,835**

Table 4-3.2 Continued
Capital Improvement Projects – Fiscal Years 2010–11 Through 2019–2020

	Planned Funding with Inflation (In Thousands $)						
Capital Project	**FY11**	**FY12**	**FY13**	**FY14**	**FY15**	**FY 16-20**	**Total 11-20**
RAW WATER TRANSMISSION & DISTRIBUTION							
South County Pipeline Right of Way Acquisition*	192	1,119	591				**1,902**
Santa Clara Conduit Rehab, Valve 1 to Coyote Pumping Plant	1,406						**1,406**
IRP2 Backup Raw Water Control Center at Almaden*	35	122	784	630			**1,571**
Alamitos Diversion Dam Improvements			307				**307**
Coyote Diversion Dam Improvements		595	1,207				**1,802**
Kirk Diversion Dam & Fish Screen Improvements		274					**274**
Main & Madrone Avenue Pipelines Restoration*		3,150					**3,150**
Penitencia Fish Facilities Modifications	231	181	815				**1,227**
Almaden-Calero Canal Rehabilitation			241	5,857	1,111	386	**7,595**
Small Capital Improvements, Raw Water Transmission*	478	393	1,332	2,297	1,116	2,721	**8,337**
Stevens Creek & Vasona Raw Water Distribution	382	870	17,712	11,705			**30,669**
FAHCE Stevens Creek Evelyn Ave Fish Ladder - 90%		918	1,388				**2,306**
FAHCE Stevens Creek Moffett Ave Fish Ladder - 90%		906	1,697				**2,604**
FAHCE Stevens Creek Fremont Ave Fish Ladder - 90%		268	748	3,750			**4,766**
FAHCE Stevens Creek Multi-Port Outlet at Dam - 90%		233	929				**1,162**
Ogier Ponds Separation from Coyote Creek*				488	509	12,348	**13,345**
Cathodic Protection of USBR-Owned Pipelines*			511	491	4,033		**5,035**
Cathodic Protection of District-Owned Pipelines		375	318	2,677			**3,370**
Raw Water Transmission & Distribution Subtotal	**2,724**	**9,405**	**28,580**	**27,895**	**6,769**	**15,455**	**90,828**
WATER TREATMENT							
WTP I/O Cards & Trunk Cable Upgrades		368	68				**436**
PWTP Chemical Systems Upgrade				1,687	238	19	**1,944**
PWTP Backwash Pump Replacement	128						**128**
PWTP Water Pumps Modifications	2,139	114	541				**2,794**
PWTP Clearwell Recoating & Repair	1,059	3,090	23				**4,172**
STWTP Incompatible Materials	1,001	157					**1,158**
RWTP FRP Residuals Management	251	11,023	7,686	923			**19,883**
RWTP FRP Primary Electrical System Improvement	4,258	1,360	91				**5,709**
RWTP FRP Site Improvement	787						**787**
RWTP FRP Chemical Storage Structure & Pump Valves Upgrades	671	3,867	340				**4,878**
RWTP Reliability Improvement	346	1,414	5,321	4,485	42,789	66,473	**120,828**
IRP2 Seismic Study and Retrofit of WTP Ops Bldg		5,815	3,571	2,843			**12,229**
Small Capital Improvements, Water Treatment	378	2,418	2,720	4,054	2,536	19,910	**32,016**
RWTP BL-1 Valve & Vault Replacement					262	1,344	**1,606**
PWTP Washwater Clarification Facility			500	601	6,394		**7,495**
PWTP Ammonia System Relocation and Upgrades		656	3,317	291			**4,264**
PWTP Filter Basin Covers		385	667				**1,052**
PWTP Large Valve Automation		811	151				**962**
RWTP Filter Polymer System Improvement				226	1,162	109	**1,497**
RWTP Advanced Treatment						43,682	**43,682**
Water Treatment Subtotal	**11,018**	**31,478**	**24,996**	**15,110**	**53,381**	**131,537**	**267,520**
Projected Carryforward*	53,444						**53,444**
TOTAL FUNDED	**105,650**	**92,022**	**91,633**	**70,764**	**187,327**	**296,451**	**843,849**

Note: The asterisked projects would benefit the South County and therefore would be funded in part or in whole by the South County.

Table 4-3.3 shows the lower priority or deferred capital projects that are not funded under the recommended charges for FY 2010–11. The postponed capital projects total approximately $536 million (inflated) over the next ten years. A higher groundwater production charge projection would be necessary to fund these postponed capital projects.

Table 4-3.3 List of Capital Projects Postponed Indefinitely

	Planned Funding with Inflation (in Thousands $)						
Capital Project	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Years 6-10**	**Total Years 1-10**
SOURCE OF SUPPLY							
Guadalupe Dam Outlet Works Rehab	466	486	770	6,132			**7,854**
Calero Dam Outlet Works Rehab	348	363	424	4,497			**5,632**
San Luis Reservoir Low Point Improvement - Design and Construction*	16,633	44,383	47,232	33,101			**141,349**
Recycled Water Masterplan - Long-Term Implementation*	8,090	112					**8,202**
Recycled Water - Advanced Treatement Plant Coyote Valley	1,723	224	2,338	10,661	6,826	**4,241**	**26,013**
Dam Seismic Stability at 7 dams*			30,000	30,000	30,000	**60,000**	**150,000**
DHCCP Implementation and Other Delta Projects*	1,000	1,030	10,061	10,363	10,674	**58,368**	**91,496**
Source of Supply Subtotal	**28,260**	**46,598**	**90,825**	**94,754**	**47,500**	**122,609**	**430,546**
RAW WATER TRANSMISSION & DISTRIBUTION							
Valve 906 Low-Flow Bypass	125	31					**156**
San Felipe Pipeline Upgrades*	483	435	10,042				**10,960**
Santa Clara Tunnel Leakage and Pacheco Conduit Dewater*	471	232	2,689				**3,392**
Church Avenue Diversion*	1,372	429	2,330	65			**4,196**
Coyote Pumping Plant ASD Replacement	372	428	566	3,153	2,785	**2,676**	**9,980**
South County Recharge Ponds*	1,333	6,367	7,166	11,146	7,294		**33,306**
Raw Water Transmission & Distribution Subtotal	**4,156**	**7,922**	**22,793**	**14,364**	**10,079**	**2,676**	**61,990**
WATER TREATMENT							
RWTP Waste Stream Separation Modification	108	648	56				**812**
WTP Filter Backwash Aid	323	1,739	175				**2,237**
Water Treatment Subtotal	**431**	**2,387**	**231**	**0**	**0**	**0**	**3,049**
TREATED WATER TRANSMISSION & DISTRIBUTION							
Milpitas Pipeline Terminus Valve & Vault	106	123	185	1,251	267		**1,932**
Treated Water Transmission & Distribution Subtotal	**106**	**123**	**185**	**1,251**	**267**	**0**	**1,932**
ADMINISTRATION & GENERAL							
Corporation Yard Implementation (Assume 55% WU share)	1,680	7,641	862	3,457	21,875	**1,007**	**36,522**
ISMP Electronic Document Management System	22	1,031	909				**1,961**
Administration & General Subtotal	**1,702**	**8,672**	**1,771**	**3,457**	**21,875**	**1,007**	**38,483**
TOTAL UNFUNDED	**34,655**	**65,702**	**115,805**	**113,826**	**79,721**	**126,292**	**536,000**

Note: The asterisked projects would benefit the South County and therefore would be funded in part or in whole by the South County.

4–4 Finances

Financing and Bond Ratings

To fund the construction of new facilities, the district has historically relied on both pay-as-you-go financing and long-term debt financing as authorized by the voters in 1984. Capital improvement needs total $843.8 million (in inflated dollars) for the ten fiscal years 2010–11 through 2019–20. As shown in Figure 4-4.1, the district will see debt service rise from $16.4 million in FY 2010–11 to just over $52 million in FY 2019–20 as a result of periodic debt issuances to fund capital. Total outstanding debt (excluding general obligation bonds) is shown in Figure 4-4.2 and is projected to increase from $267 million in FY 2010–11 to $645 million in FY 2019–20. This outstanding debt could be significantly higher if all postponed capital projects were funded.

Figure 4-4.1 Projected Debt Service

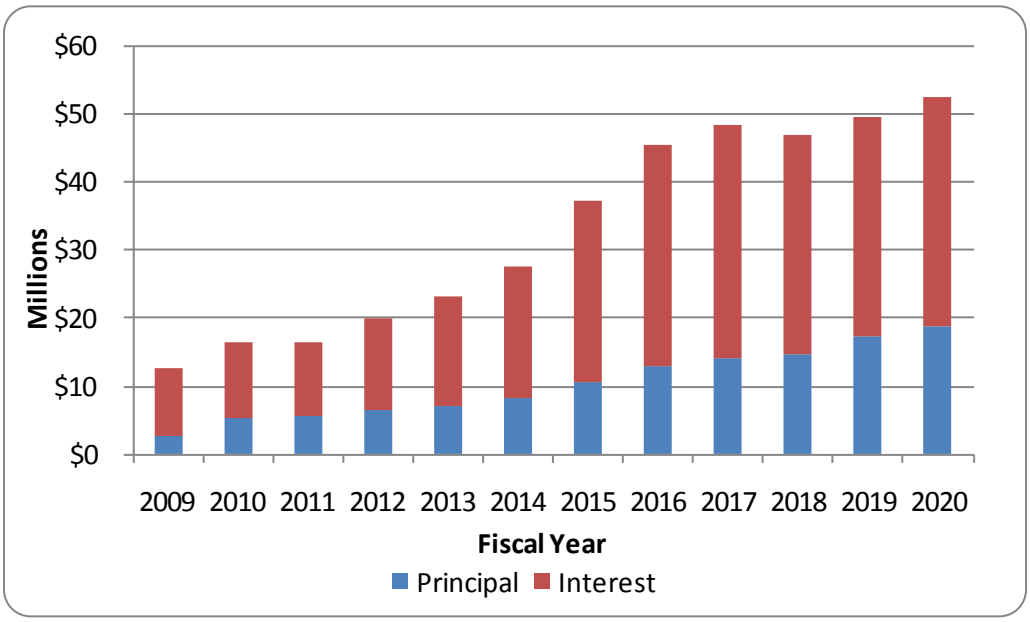
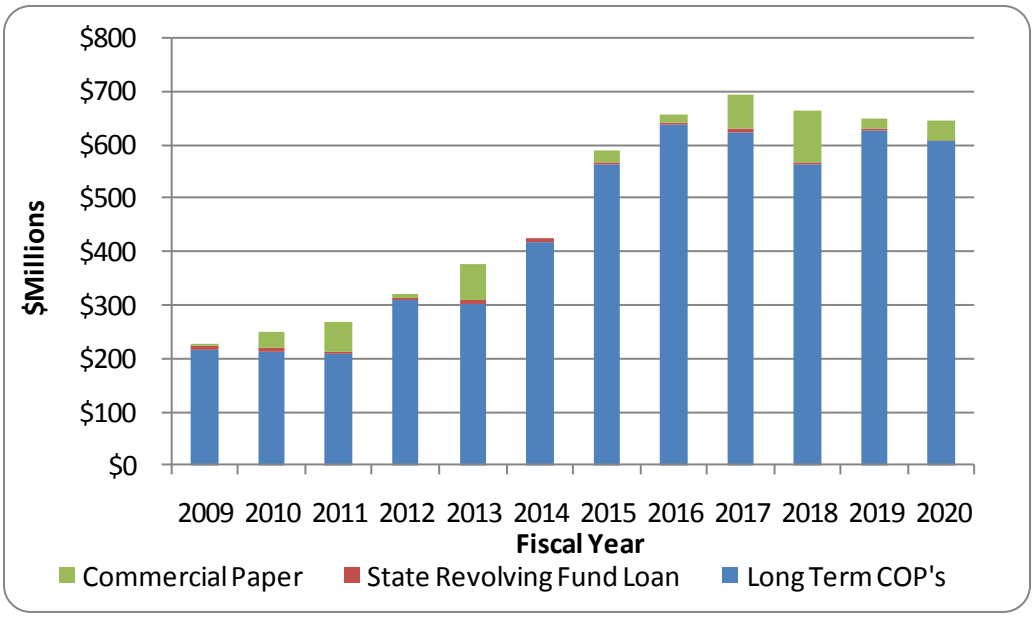


Figure 4-4.2 Projected Outstanding Debt



The district was upgraded to a rating of Aa2 from Moody's in September 2007 while the Standard & Poor's rating is AA. These ratings reflect the district's strong financial position and the highly rated creditworthiness of district issued securities. The ratings are among the highest for a water-related governmental entity in the state of California, which helps keep interest costs borne by the district at a minimum.

Water Utility Fund Projected Proforma

Table 4-4.1 shows the projected revenues, expenditures, and reserves over the next ten years for the Water Utility Fund. By financing with a combination of debt, current year revenue, and reserves, the district is able to meet its capital investment plan. Under the recommended projection, the financial model assumes that discretionary reserves are maintained at minimum per district policy.

The financial model under the recommended projection reflects a senior Lien Debt Service Coverage Ratio ranging between 1.91 and 2.59 through FY 2019–20. Targeting a ratio of 2.0 or better helps to ensure financial stability and continued high credit ratings.

Table 4-4.1
Ten-Year Water Utility Plan- ($ in Thousands)

	Actual	Adjusted Budget	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected
	2008–09	2009–2010	2010–11	2011–12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Operating Revenues												
Groundwater Production Charges	$61,104	$61,442	$62,930	$68,427	$79,422	$86,130	$94,161	$102,457	$111,320	$120,183	$127,341	$133,930
Surface & Recycled Water Charges	$1,240	$2,288	$2,374	$2,550	$2,775	$2,986	$3,268	$3,533	$3,848	$4,130	$4,467	$4,683
Treated Water Charges	$74,012	$73,767	$67,980	$72,726	$78,354	$89,305	$96,843	$104,962	$113,660	$122,359	$129,318	$135,697
Inter-governmental Services	$3,946	$4,511	$1,169	$1,184	$1,217	$1,393	$1,266	$1,288	$1,315	$1,332	$1,367	$1,387
Total Operating Revenue	**$140,301**	**$142,008**	**$134,453**	**$144,887**	**$161,768**	**$179,814**	**$195,538**	**$212,240**	**$230,143**	**$248,004**	**$262,493**	**$275,697**
Non-Operating Revenues												
Property Taxes	$21,373	$23,649	$22,567	$24,361	$26,108	$28,278	$31,456	$34,642	$37,835	$42,037	$45,248	$45,469
Interest	$7,279	$2,652	$2,652	$1,890	$1,961	$2,042	$2,183	$2,358	$2,506	$2,638	$2,741	$3,507
Capital Contributions	$0	$189	$7,339	$28,478	$3,252	$266	$164	$57	$108	$104	$114	$688
Other	$4,580	$3,829	$2,331	$1,333	$1,335	$1,338	$1,341	$1,344	$1,347	$1,350	$1,354	$1,357
Total Non-Operating Revenues	$33,232	$30,318	$34,889	$56,062	$32,656	$31,924	$35,144	$38,401	$41,796	$46,129	$49,457	$51,022
Total Revenue	**$173,533**	**$172,327**	**$169,343**	**$200,949**	**$194,425**	**$211,738**	**$230,682**	**$250,640**	**$271,939**	**$294,134**	**$311,950**	**$326,718**
Operating Outlays												
Operations	$141,822	$125,059	$124,225	$129,878	$138,053	$148,674	$156,020	$165,321	$175,489	$184,998	$199,021	$202,589
Operating Projects	$4,329	$4,147	$4,827	$4,967	$3,233	$3,835	$8,222	$8,004	$7,991	$8,103	$8,281	$8,402
Debt Service	$12,616	$16,472	$16,413	$19,964	$23,287	$27,555	$37,145	$45,521	$48,529	$46,869	$49,632	$52,390
Total Operating Outlays	$158,767	$145,678	$145,465	$154,809	$164,573	$180,064	$201,387	$218,846	$232,008	$239,969	$256,934	$263,381
Operating Transfers In/(Out)	$6,618	(269)	348	0	0	0	0	0	0	0	0	0
Debt Proceeds	$0	33,000	21,346	49,243	63,150	43,126	163,434	72,950	50,778	(12,712)	(6,891)	14,242
State Revolving Fund Loan Proceeds	$0	0	0	0	0	0	0	0	0	0	0	0
Capital Outlay	($50,868)	(90,333)	(105,650)	(92,023)	(91,634)	(70,764)	(187,327)	(98,467)	(87,117)	(36,277)	(46,439)	(28,151)
Total Other Financing Sources/ (Uses)	($44,250)	(57,602)	(83,956)	(42,780)	(28,484)	(27,638)	(23,893)	(25,517)	(36,339)	(48,989)	(53,330)	(13,909)
Balance Avaliable	**($29,562)**	**(30,953)**	**(60,078)**	**3,360**	**1,368**	**4,037**	**5,401**	**6,278**	**3,592**	**5,176**	**1,686**	**49,428**
Reserves:												
Restricted Reserves:												
WUE-Restricted Operating Reserve	$12,344	$12,140	$12,122	$12,901	$13,714	$15,005	$16,782	$18,237	$19,334	$19,997	$21,411	$21,948
WUE - Rate Stablization Reserve	$1,341	$1,647	$1,647	$1,647	$1,647	$1,647	$1,647	$1,647	$1,647	$1,647	$1,647	$1,647
San Felipe Emergency Reserve	$3,772	$3,772	$3,772	$3,772	$3,772	$3,772	$3,772	$3,772	$3,772	$3,772	$3,772	$3,772
Revenue Bond Debt Service Reserve	$4,966	$4,966	$4,966	$4,966	$4,966	$4,966	$4,966	$4,966	$4,966	$4,966	$4,966	$4,966
State Revolving Fund	$401	$401	$401	$401	$401	$401	$401	$401	$401	$401	$401	$401
Total Restricted	$22,824	$22,927	$22,909	$23,688	$24,501	$25,792	$27,569	$29,024	$30,121	$30,784	$32,198	$32,735
Designated Reserves:												
Floating Rate Debt Stabilization	$496	$496	$496	$496	$496	$496	$496	$496	$496	$496	$496	$496
Designated for Operating and Capital	$23,644	$29,770	$22,753	$24,935	$25,089	$27,435	$30,660	$35,082	$37,178	$41,290	$41,163	$89,654
Supplemental Water Supply Appropo.	$6,319	$8,840	$9,240	$9,640	$10,040	$10,440	$10,840	$11,240	$11,640	$12,040	$12,440	$12,840
Currently Authorized Projects	$93,145	$53,444	($0)	($0)	($0)	($0)	($0)	($0)	($0)	($0)	($0)	($0)
Total Designated Reserves	$123,605	$92,550	$32,489	$35,070	$35,625	$38,371	$41,996	$46,818	$49,314	$53,826	$54,098	$102,989
Designated Liability & Other:												
GO litigation liability	$5,930	$5,930	$5,930	$5,930	$5,930	$5,930	$5,930	$5,930	$5,930	$5,930	$5,930	$5,930
Total Designated Liability & Other	$5,930	$5,930	$5,930	$5,930	$5,930	$5,930	$5,930	$5,930	$5,930	$5,930	$5,930	$5,930
Total	$152,359	$121,406	$61,328	$64,688	$66,056	$70,093	$75,494	$81,772	$85,364	$90,540	$92,226	$141,655
Debt Service Coverage												
Senior Lien Debt Service Coverage	2.67	2.51	1.98	1.99	2.30	2.33	1.98	1.91	2.06	2.45	2.44	2.59

North County (Zone W-2) Finances

North County (Zone W-2) is generally defined as the portion of the county north of Metcalf Road. North County (Zone W-2) accounts for approximately 80 percent of district water consumption, but because of higher charges due to higher North County costs, over 95 percent of the Water Utility Enterprise's revenue. As shown at the beginning of the financial section in Table 4-1.1, staff recommends a $520 per acre-foot groundwater production charge for municipal and industrial (M&I) or other non-agricultural water and a $620 per acre-foot charge for contract treated water for FY 2010–11. If adopted, there would be no increase for groundwater production or contract treated water compared to FY 2009–10. Customers may experience charge increases enacted by their retail water provider.

Staff proposes to maintain the North County agricultural groundwater production charge at $16.50 per acre-foot in FY 2010–11 in concert with the South County agricultural groundwater production charge. The resulting agricultural groundwater production charge is 3.2 percent of the M&I groundwater production charge in North County.

Staff also recommends maintaining the surcharge on treated water delivered under the contracts with retail agencies at $100 per acre-foot. As outlined in treated water contracts, the district has the discretion to make available treated water in excess of the retailers' basic contract amounts, so-called non-contract treated water, "… at such times and such prices as determined by the district." Staff recommends reducing the non-contract surcharge from $150 per acre-foot to $50 per acre-foot for FY 2010–11. Given recent rains, staff anticipates having adequate surface water supplies to meet contract and non-contract deliveries.

Table 4-4.2 shows the relationship between expenditures and the sources of revenue in Zone W-2. The groundwater production charges for FY 2010–11 are necessary to conduct "district activities in the protection and augmentation of the water supplies for users within a zone or zones of the district which are necessary for the public health, welfare, and safety of the people of this state" (District Act, Section 26.3).

Table 4-4.2
Fiscal Year 2010–11 North County Water Utility Program Requirements and Financing Sources

Program	Cost Category	FY 11 Projected ($K)	Description of Activities
Groundwater Management	Groundwater Management	4,649	Operate & maintain recharge ponds, canals, pipelines & diversions including vegetation management, groundwater level & quality monitoring, groundwater modeling, subsidence data collection & analysis, groundwater recharge reuse, groundwater recharge evaluation
Treated Water Oerations & Maint	Treatment Plant Operations & Maintenance	24,391	Operate & maintain 3 water treatment plants
	Drinking Water Quality	5,130	Water District laboratory operations, water quality planning, testing, research, and reporting
	Treated Water Transmission & Distribution	2,520	Maintain & operate treated water transmission and distribution system
Water Supply	Water Supply Acquisition & Storage	6,285	Dams and reservoir operations & maintenance, water banking program, imported water supply management, long-term Delta issues resolution
	Imported Water Purchases	38,677	Imported water purchases
	Raw Water Transmission & Distribution	5,439	Operate & maintain raw water distribution system, including mechanical, electrical and SCADA
Water Supply Planning	Short-Term Water Supply Planning and Operations	881	Data collection & analysis, water supply conditions analysis, operations planning, shortage contingency planning & implementation, operating policies and procedures
	Water Supply System Sustainability	789	Water rights protection, disaster planning, asset protection
	Long-term Water Supply Planning	3,154	Integrated Water Resources Plan, Urban Water Management Plan, infrastructure master planning, integrated regional water management plan, water system computer modeling
Recycling & Conservation	Water Recycling	1,705	Administer agreements, planning, technical studies, recycled water rebates
	Water Desalination	-	regional desalination project, salinity management
	Water Conservation	8,132	Technical assistance, financial incentives, outreach and education, program development
Natural Resource Protection	Resource Protection	2,493	Environmental planning & compliance, well permitting and destruction, biodiversity monitoring
	Mitigations to Protect Natural Resources	1,833	Environmental compliance support, habitat conservation and mitigation commitments, urban runoff polution prevention
	Climate Change Mitigation and Adaptation	124	Programs and activities to mitigate climate change impacts and plan for adaptation strategies
Support Services	Water Utility Business Services	10,500	General & division management; performance measures; non-project related unit management; communications; financial support & water charge setting; public outreach; health and safety training; billing, data maintenance, auditing; meter reading, testing, repair, installation, backflow prevention
	Strategic Support Services	1,420	Emergency services, warehouse and equipment services, real estate services, ethics & diversity
Capital & Other	Debt Service	16,413	Principal and Interest payments on outstanding debt
	Capital Improvements	105,650	Capital Improvement Program
	Open Space Credit	5,654	Help preserve the open space benefits provided by agricultural lands
	Operating Cost Reductions/Other Adjustments	-	Operating Cost reductions or adjustments
	Total Program Requirements	**245,839**	
	Financing Sources		
	Capital Cost recovery	2,889	
	Debt Proceeds	21,346	
	Interest & Other	15,997	
	Property Tax	20,594	
	Treated Water Sales	67,980	
	Surface Water Charges	1,862	
	Groundwater Production Charges	55,093	
	Capital Carryforward Reserves	53,444	
	Change in Reserves	6,634	
	Total Financing Sources	**245,839**	

Table 4-4.3 shows the cost of service analysis by customer class following six industry standard rate making steps:

1) Identify utility pricing objectives and constraints
2) Identify revenue requirements
3) Allocate costs to customer classes
4) Reduce costs by revenue offsets or non-rate related funding sources
5) Develop unit costs by customer class or net revenue requirements by customer class
6) Develop unit rates by customer class

Water Utility pricing objectives and constraints are identified in Resolution 99-21[2] and in the District Act, Proposition 218 and existing contracts.

Line 11 in Table 4-4.3 represents rate making steps 2 and 3 summarizing the revenue requirements for Zone W-2 including operations costs, capital costs and debt service. Step 2 involves allocating water utility costs between zones W-2 and W-5 according to the benefits provided in each zone. Appendix B shows the percentage of operations costs allocated to the South County, along with a brief description of the basis of the allocation. Appendix C shows the percentage of capital and debt service costs allocated to South County along with a brief description of the basis of the allocations. Costs not allocated to the South County are allocated to the North County. Step 3 involves allocating costs directly to each customer class where possible, or allocating based on volume where the costs benefit multiple customer classes.

Line 27 in Table 4-4.3 represents rate making steps 4 and 5. It reflects the unit cost per acre-foot by customer class after applying non-rate related offsets to the revenue requirements. Offsets have been allocated directly to each zone and customer class where possible, or allocated based on volume where the offset applies to multiple customer classes.

Line 37 represents rate making step 6. There are two adjustments that have been made to achieve a pricing structure that meets the objectives of Resolution 99-21, namely a structure that facilitates managing surface water and groundwater supplies conjunctively to prevent the over use or under use of the groundwater basin. First ad valorem property taxes are offset against the cost of agricultural water. This is referred to as the "open space" credit. The purpose of the credit is to preserve the open space benefits provided by agricultural lands by keeping agricultural groundwater production charges low.

The second adjustment involves reallocating the cost of treated water to groundwater and surface water users. Importing water into the county for treatment and subsequent distribution to treated water users offsets the need to pump water from the ground. Without treated imported water supplies, the groundwater basin would have become overdrafted. Consequently the reallocation of treated water cost represents the value of treated water to groundwater and surface water users and facilitates a pricing structure that prevents the over use of the groundwater basin.

[2] Resolution 99-21 can be found at www.valleywater.org/Services/2010-11ChargeSettingProcess.aspx

Table 4-4.3
Fiscal Year 2010–11 North County (Zone W2) Cost of Service by Customer Class

	FY '11 Projection ($K)	Zone W-2					
		GW		TW	SW		Total W-2
		M&I	AG	M&I	M&I	Ag	
1	**Operating Outlays**						
2	Operations/Operating Projects	28,412	107	66,277	905	9	95,710
3	SWP Imported Water Costs	4,987	19	17,079	323	3	22,411
4	Debt Service	3,473	13	12,811	115	1	16,413
5	**Total Operating Outlays**	36,872	139	96,166	1,343	14	134,535
6	Step 2- Identify revenue reqmnts						
7	**Capital & Transfers**						
8	Operating Transfers Out	-	-	-	-	-	-
9	Capital Outlays excl. carryforward	16,443	62	35,168	527	6	52,207
10	**Total Capital & Transfers**	16,443	62	35,168	527	6	52,207
11	**Total Annual Program Costs**	53,315	201	131,334	1,870	20	186,741
12		Step 3 - Allocate costs to customer classes					
13	**Revenue Requirement Offsets**						
14	Capital Cost Recovery	(1,394)	(5)	(1,443)	(46)	(0)	(2,889)
15	Debt Proceeds	(6,723)	(25)	(14,379)	(216)	(2)	(21,346)
16	Inter-governmental Services	(512)	(2)	(529)	(17)	(0)	(1,060)
17	SWP and W-1 Property Taxes	(3,765)	(14)	(13,436)	(244)	(3)	(17,462)
18	Inter-zone Interest	(107)	(0)	(110)	(4)	(0)	(221)
19	Capital Contributions	(3,542)	(13)	(3,666)	(117)	(1)	(7,339)
20	Perchlorate Response	(1,174)	(4)	(1,215)	(39)	(0)	(2,433)
21	Other	(349)	(1)	(1,922)	(18)	(0)	(2,291)
22	Reserve Requirements	(2,090)	(8)	(4,469)	(67)	(1)	(6,634)
23	**Adjusted Revenue Requirement**	33,659	127	90,164	1,103	12	125,066
24							
25	Volume (KAF)	105.9	0.4	109.6	3.5	0.0	219.5
26							
27	Revenue Requirement per AF	$ 318	$ 318	$ 822	$ 315	$ 315	
28		Step 5 - Develop unit costs by customer class					
29	**Adjustments for Agricultural Preservation**						
30	Allocate WU 1% Ad Valorem Prop Tax	0	(120)	-	-	(10)	(131)
31	Allocate Interest Earnings	-	-	-	-	-	-
32	Transfer WS 1% Ad Valorem Prop Tax	-	-	-	-	-	-
33	Revenue Requirement per AF	$ 317.7	$ 16.5	$ 822	$ 315	$ 28.3	
34	Step 6 - Rate Design						
35	**Adjustments to Facilitate Conjunctive Use**						
36	Reallocate TW/SW/RW costs	21,426	-	(22,184)	758	-	0
37	Charge per AF	$ 520	$ 16.5	$ 620	$ 532	$ 28.3	
38	Total Revenue ($K)	$55,086	$7	$67,980	$1,861	$1	$124,935

South County (Zone W-5) Finances

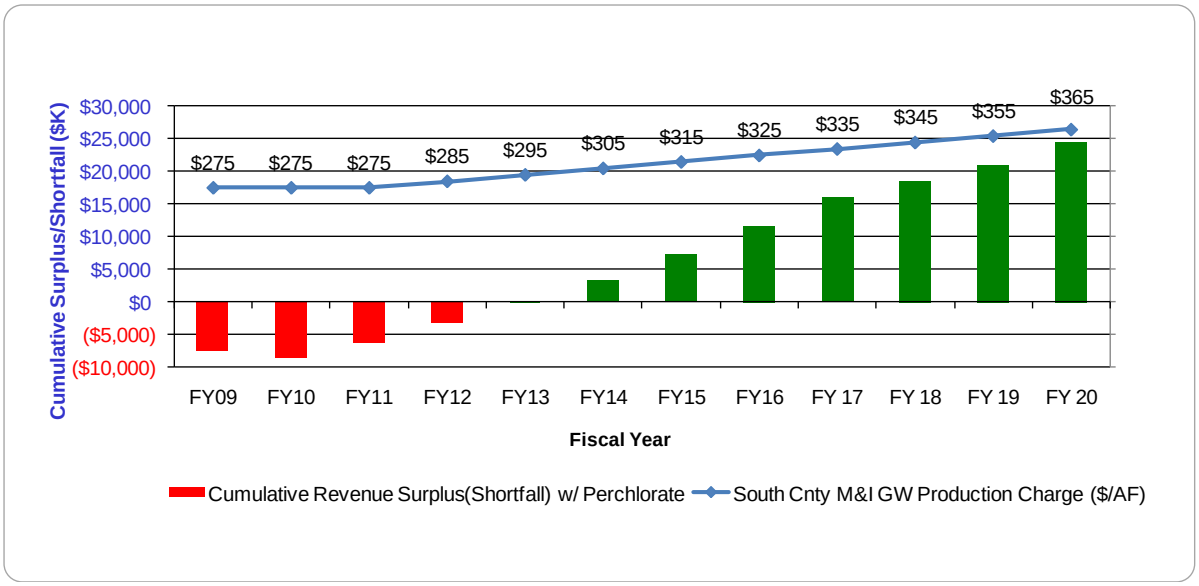
South County (Zone W-5) is generally defined as the portion of Santa Clara County south of Metcalf Road, including Coyote Valley, Morgan Hill, San Martin, Gilroy and other unincorporated areas within the zone. Within the Water Utility Fund, district staff track revenues and costs associated with the South County Zone W-5 separately so that the groundwater production charge for services that benefit the South County Zone can be calculated.

Charges in the South County (Zone W-5) are based on the costs of specific facilities, imported water costs, and operations costs related to managing a conjunctive use program, ensuring water quality, and measuring water supplies and usage. Under current policies for managing the finances of South County, charges are set to maintain an approximate balance between revenues and costs. The cumulative balance is tracked, and historically projected charges have been set to keep the cumulative balance near zero, while maintaining relative stability in South County charges. Successive years of surplus or shortfall can occur.

For South County, staff recommends a groundwater production charge of $275 per acre-foot for M&I water and a $16.50 per acre-foot groundwater production charge for agricultural water, which is the same as the prior year. Customers may experience water charge increases enacted by their retail water provider.

On a cumulative basis, costs are estimated to exceed revenues by almost $6.3 million at the end of FY 2010–11. Figure 4-4.3 shows the projected cumulative revenue shortfall under the recommended charge projection for South County. Under this projection, cumulative costs will exceed cumulative revenues and will not be balanced until FY 2012–13. The projection assumes an average increase of 2.9 percent in the M&I groundwater charge between FY 2009–10 and FY 2019–20. The average increase under the high end of the projected range shown in Figure 4-1.1 is 7.7 percent, over the same time frame.

Figure 4-4.3 South County Cumulative Revenue Surplus / Shortfall Projection ($/Thousands)



The revenue shortfall, which began in FY 2002–03 was initially driven by capital investments in recycled water and conservation. In subsequent years, cost increases were driven by program enhancements including increased water supply planning and collaboration efforts, installation and operation of more wells to monitor groundwater levels and quality, development of computer models for the groundwater basins, initiation of an asset management program, more maintenance work on San Felipe Division facilities and raw water pipelines, and improved security. More recently, increases in imported water contract rates and loss of property tax revenue to the State of California have exacerbated the revenue shortfall.

In 2003, the district initiated an aggressive strategy on behalf of South County groundwater users to respond to the perchlorate contamination found in the Llagas Subbasin. Perchlorate response costs were funded with Water Utility reserves under the expectation that the responsible party would reimburse the district. The responsible party will reimburse the district for certain costs based on the terms of a yet to be signed court supervised settlement agreement. A balance of roughly $4.6 million remains to be paid back to Water Utility reserves. Staff has phased in the repayment by South County groundwater users (both agricultural and non-agricultural) over a 2-year time frame.

The District Act limits agricultural groundwater production charges to a maximum of 25 percent of the municipal and industrial (M&I) groundwater production charges. Current board policy adds an "open space" credit to agricultural revenues. The purpose of the credit is to preserve the open space benefits provided by agricultural lands by keeping agricultural groundwater production charges low. To the extent that Proposition 218 applies to the groundwater production charge, it requires that costs to end users be proportional such that one class of users is not subsidizing another. While the applicability of Proposition 218 to the groundwater production charge has yet to be finally determined by the courts, the district is committed to responding to the concerns embodied in the constitutional amendments.

To comply with the current agricultural groundwater production charge setting policy, staff recommends increasing the open space credit received by South County from $1.2M in FY 2009-10 to $6.0 million in FY 2010–11 (funded by 1 percent ad valorem property taxes and interest earnings). The recommended agricultural groundwater production charge for FY 2010–11 is $16.50, which is 6 percent of the M&I groundwater production charge in South County.

Table 4-4.4 shows the relationship between expenditures and sources of revenue in South County for FY 2010–11. It is estimated that South County will pay for $10.9 million of operating costs and pay back $2.4 million of perchlorate costs and $2.9 million in capital costs. The specific operating costs allocated to South County can be found in Appendix B. Details on capital cost recovery can be found in Appendix C. The groundwater production charges recommended for FY 2010–11 in Zone W-5 are necessary to conduct, "district activities in the protection and augmentation of the water supplies for users within a zone or zones of the district which are necessary for the public health, welfare, and safety of the people of this state" (District Act, Section 26.3).

Table 4-4.4
Fiscal Year 2010-11 South County Water Utility Program Requirements and Financing Sources

Program	Cost Category	FY 11 Projected ($K)	Description of Activities
Groundwater Management	Groundwater Management	2,293	Operate & maintain recharge ponds, canals, pipelines & diversions including vegetation management, groundwater level & quality monitoring, groundwater modeling, subsidence data collection & analysis, groundwater recharge reuse, groundwater recharge evaluation
Treated Water Operations & Maint	Treatment Plant Operations & Maintenance	-	Operate & maintain 3 water treatment plants
	Drinking Water Quality	112	Water District laboratory operations, water quality planning, testing, research, and reporting
	Treated Water Transmission & Distribution	-	Maintain & operate treated water transmission and distribution system
Water Supply	Water Supply Acquisition & Storage	1,101	Dams and reservoir operations & maintenance, water banking program, imported water supply management, long-term Delta issues resolution
	Imported Water Purchases	1,990	Imported water purchases
	Raw Water Transmission & Distribution	859	Operate & maintain raw water distribution system, including mechanical, electrical and SCADA
Water Supply Planning	Short-Term Water Supply Planning and Operations	162	Data collection & analysis, water supply conditions analysis, operations planning, shortage contingency planning & implementation, operating policies and procedures
	Water Supply System Sustainability	178	Water rights protection, disaster planning, asset protection
	Long-term Water Supply Planning	280	Integrated Water Resources Plan, Urban Water Management Plan, infrastructure master planning, integrated regional water management plan, water system computer modeling
Recycling & Conservation	Water Recycling	187	Administer agreements, planning, technical studies, recycled water rebates
	Water Desalination	-	regional desalination project, salinity management
	Water Conservation	727	Technical assistance, financial incentives, outreach and education, program development
Natural Resource Protection	Resource Protection	2,985	Environmental planning & compliance, well permitting and destruction, biodiversity monitoring, perchlorate response payback
	Mitigations to Protect Natural Resources	100	Environmental compliance support, habitat conservation and mitigation commitments, urban runoff polution prevention
	Climate Change Mitigation and Adaptation	14	Programs and activities to mitigate climate change impacts and plan for adaptation strategies
Support Services	Water Utility Business Services	2,222	General & division management; performance measures; non-project related unit management; communications; financial support & water charge setting; public outreach; health and safety training; billing, data maintenance, auditing; meter reading, testing, repair, installation, backflow prevention
	Strategic Support Services	153	Emergency services, warehouse and equipment services, real estate services, ethics & diversity
Capital & Other	Capital Cost Recovery	2,889	Annual payment for completed capital facilities and improvements
	Interest (Earned)/Due Utility Reserves	221	Based on cumulative revenue shortfall at 3% interest rate
	Operating Cost Reductions/Other Adjustments	-	Operating Cost reductions or adjustments
	Total Program Requirements	**16,473**	
	Financing Sources		
	Open Space Credit	6,002	
	Property Tax & Other Revenue	2,122	
	Surface Water Charges	94	
	Recycled Water Charges	418	
	Groundwater Production Charges	7,838	
	Total Financing Sources	**16,473**	
	FY 11 Revenue Surplus	**(0)**	

Table 4-4.5 shows the cost of service analysis by customer class following the six industry standard rate making steps (the steps are described under the North County Finances section) for South County Zone W-5.

Line 11 in Table 4-4.5 represents rate making steps 2 and 3 summarizing the revenue requirements for Zone W-5. Costs have been allocated directly to each customer class where possible, or allocated based on volume where the costs benefit multiple customer classes.

Line 27 in Table 4-4.5 represents rate making steps 4 and 5. It reflects the unit cost per acre-foot by customer class after applying non-rate related offsets to the revenue requirements. Offsets have been allocated directly to each customer class where possible, or allocated based on volume where the offset applies to multiple customer classes.

Line 37 represents rate making step 6. There are two adjustments that have been made to achieve a pricing structure that meets the objectives of Resolution 99-21, namely a structure that facilitates managing surface water and groundwater supplies conjunctively to prevent the over use or under use of the groundwater basin. First ad valorem property taxes and interest earnings are offset against the cost of agricultural water. This is referred to as the "open space" credit. The purpose of the credit is to preserve the open space benefits provided by agricultural lands by keeping agricultural groundwater production charges low.

The second adjustment involves reallocating the cost of recycled water to groundwater users. Without recycled water supplies, there would be additional demand on the groundwater basin and a higher risk of overdraft. Consequently, the reallocation of recycled water cost represents the value of recycled water to groundwater users and facilitates a pricing structure that prevents the over use of the groundwater basin.

Table 4-4.5

Fiscal Year 2010–11 South County (Zone W5) Cost of Service by Customer Class

	FY '11 Projection ($K)	Zone W-5						
		GW		SW		RW		Total W-5
		M&I	AG	M&I	AG	M&I	AG	
1	**Operating Outlays**							
2	Operations/Operating Projects	5,372	4,974	52	339	123	70	10,930
3	SWP Imported Water Costs	-	-	-	-	-	-	-
4	Debt Service	-	-	-	-	-	-	-
5	**Total Operating Outlays**	5,372	4,974	52	339	123	70	10,930
6								
7	**Capital & Transfers**							
8	Operating Transfers Out	-	-	-	-	-	-	-
9	Capital Outlays excl. carryforward	-	-	-	-	-	-	-
10	**Total Capital & Transfers**	-	-	-	-	-	-	-
11	**Total Annual Program Costs**	5,372	4,974	52	339	123	70	10,930
12								
13	**Revenue Requirement Offsets**							
14	Capital Cost Recovery	1,045	967	8	50	522	298	2,889
15	Debt Proceeds	-	-	-	-	-	-	-
16	Inter-governmental Services	(55)	(51)	(0)	(3)	-	-	(109)
17	SWP and W-1 Property Taxes	(524)	(485)	(4)	(25)	(27)	(16)	(1,080)
18	Inter-zone Interest	107	99	1	5	6	3	221
19	Capital Contributions	-	-	-	-	-	-	-
20	Perchlorate Response	1,263	1,170	-	-	-	-	2,433
21	Other	(20)	(19)	(0)	(1)	-	-	(40)
22	Reserve Requirements	-	-	-	-	-	-	-
23	**Adjusted Revenue Requirement**	**7,188**	**6,656**	**56**	**366**	**623**	**356**	**15,244**
24								
25	Volume (KAF)	27.0	25.0	0.2	1.3	1.4	0.8	55.7
26								
27	Revenue Requirement per AF	$ 266	$ 266	$ 281	$ 281	$ 445	$ 445	
28								
29	**Adjustments for Agricultural Preservation**							
30	Allocate WU 1% Ad Valorem Prop Tax	-	(3,895)	-	-	-	-	(3,895)
31	Allocate Interest Earnings	-	(2,348)	-	(304)	-	-	(2,652)
32	Transfer WS 1% Ad Valorem Prop Tax	-	-	-	(25)	-	(323)	(348)
33	Revenue Requirement per AF	$ 266	$ 16.5	$ 281	$ 28.3	$ 445	$ 41.5	
34								
35	**Adjustments to Facilitate Conjunctive Use**							
36	Reallocate TW/SW/RW costs	237	-	1	-	(238)	-	-
37	Charge per AF	$ 275	$ 16.5	$ 287	$ 28	$ 275	$ 41.5	
38	Total Revenue ($K)	$7,425	$413	$57	$37	$385	$33	$8,349

Step 2- Identify revenue reqmnts

Step 3 - Allocate costs to customer classes

Step 4- Reduce costs by revenue offsets

Step 5 - Develop unit costs by customer class

Step 6 - Rate Design

APPENDIX A

Water Utility Charge Components and Recommended Charges

TABLE A-1 Recommended Charge Components for Fiscal Year 2010–11

Component	Charge ($/AF)
Basic User, Zone W-2 (North County) Agricultural M&I	 16.50 520.00
Basic User, Zone W-5 (South County/Coyote Valley) Agricultural M&I	 16.50 275.00
Treated Water Surcharge Contract Non-contract	 100.00 50.00
Surface Water Charge Water Master	 11.75

TABLE A-2 Recommended Charges for Fiscal Year 2010–11

Type of Charge	AG Water ($/AF)	M&I Water ($/AF)
Groundwater Production Zone W-2 Zone W-5	 $16.50 $16.50	 $520.00 $275.00
Surface Water[1] Other Zone W-5 Deliveries[2] Other Zone W-2 Deliveries[3] Minimum Charge Zone W-5[4] Minimum Charge Zone W-2[5]	 $28.25 $28.25 $206.25 $390.00	 $286.75 $531.75 $206.25 $390.00
Stored Water Zone W-2 Zone W-5	 $16.50 $16.50	 $520.00 $275.00
Treated Water Contract[6] Non-contract[7]	 N/A N/A	 $620.00 $570.00
Recycled Water Gilroy	 $41.50	 $275.00

[1] Surface water charge is the sum of the basic user charge plus the water master charge. It also includes the capital cost and power, wherever applicable.
[2] Other Zone W-5 Deliveries = Basic User (AG or M&I @ $16.50/AF or $275.00/AF) + Water Master ($11.75/AF).
[3] Other Zone W-2 Deliveries = Basic User (AG or M&I @ $16.50/AF or $520.00/AF) + Water Master ($11.75/AF).
[4] Minimum Charge W-5 = 0.75 X Basic User W-5 (M&I @ $275.00/AF).
[5] Minimum Charge W-2 = 0.75 X Basic User W-2 (M&I @ $520.00/AF).
[6] Treated Water Charge is the sum of Basic User ($520.00/AF) and Treated Water Surcharge ($100.00/AF).
[7] The charge for non-contract deliveries is the sum of the basic user charge ($520.00/AF) and the treated water surcharge for non-contract water ($50.00/AF).

APPENDIX B

Basis of Operating Cost Allocations Between North and South Zones (In Thousands $)

		Project #	Project Name	South County Allocation	South County Share	North County Share	Total FY 2011	Basis of Allocation
Groundwater Management	Groundwater Management	91041015	Groundwater Recharge Reuse	6.0%	11	179	190	Population
		91042010	GroundWater Recharge Evaluatin	32.8%	38	77	115	Groundwater Recharge Ratio
		91042018	Groundwater Management Plan	35.7%	119	214	332	Groundwater Production Ratio
		91551001	Groundwater Monitoring	35.7%	221	398	619	Groundwater Production Ratio
		91551002	Groundwater Supply Management	35.7%	396	712	1,108	Groundwater Production Ratio
		91791012	Groundwater Quality Management	35.7%	516	930	1,446	Groundwater Production Ratio
		92761006	Rchrg & Raw Wtr Field Fac Asset Mgmt	32.8%	71	145	216	Groundwater Recharge Ratio
		92761007	Rchg & Raw Wtr Field Ops Plng & Anal	32.8%	83	170	253	Groundwater Recharge Ratio
		95811049	X Valley Level & Benchmark	0.0%	-	106	106	No South County Benefit
		61A01086	Recharge/RW Field Fac Maint	32.8%	91	185	276	Groundwater Recharge Ratio
		61A01087	Recharge/RW Field Ops	32.8%	748	1,533	2,281	Groundwater Recharge Ratio
					2,293	**4,649**	**6,942**	
Treated Water Operations and Maintenance	Treatment Plant Operations & Maintenance	93231007	PWTP Landslide Monitoring	0.0%	-	107	107	No South County Benefit
		93231009	PWTP Operations General	0.0%	-	4,531	4,531	No South County Benefit
		93231039	PWTP Ctrl and Electr Eng Serv	0.0%	-	378	378	No South County Benefit
		93231099	Penitencia WTP General Maint	0.0%	-	1,204	1,204	No South County Benefit
		93281005	STWTP - General Operations	0.0%	-	5,399	5,399	No South County Benefit
		93281040	STWP Ctrl and Electr Eng Serv	0.0%	-	378	378	No South County Benefit
		93281099	Santa Teresa Wtr General Maint	0.0%	-	1,370	1,370	No South County Benefit
		93291012	RWTP General Operations	0.0%	-	7,838	7,838	No South County Benefit
		93291041	RWTP Ops Crtl and Electr Eng Serv	0.0%	-	380	380	No South County Benefit
		93291099	Rinconada WTP General Maint	0.0%	-	1,978	1,978	No South County Benefit
		93761001	SF/SCVWD Intertie General Ops	0.0%	-	140	140	No South County Benefit
		93761004	Campbell Well Field Operations	0.0%	-	37	37	No South County Benefit
		93761005	Campbell Well Field Maintenance	0.0%	-	31	31	No South County Benefit
		93761099	SF/SCVWD Intertie General Maint.	0.0%	-	78	78	No South County Benefit
		61A01091	Water Treatment Plant - Engineering - Other	0.0%	-	541	541	No South County Benefit
					-	**24,391**	**24,391**	
	Drinking Water Quality	91452011	Invasive Mussel Prevention	13.6%	98	624	722	Raw Water Deliveries
		93081008	W T General Water Quality	0.0%	-	1,398	1,398	No South County Benefit
		93401002	Wtr District Laboratory	0.4%	14	3,108	3,122	Lab Analyses
					112	**5,130**	**5,242**	
	Treated Water Transmission & Distribution	94761004	Treated Wtr T&D Ctrl and Ele	0.0%	-	171	171	No South County Benefit
		94761005	Treated Water Eng - Other	0.0%	-	177	177	No South County Benefit
		94761099	Treated Water T&D Gen Maint	0.0%	-	717	717	No South County Benefit
		94781001	Treated Water T&D Corrosion	0.0%	-	325	325	No South County Benefit
		N/A	Treated Water Placeholder	0.0%	-	1,130	1,130	No South County Benefit
					-	**2,520**	**2,520**	

Basis of Operating Cost Allocations Between North and South Zones (In Thousands $) . . . (Continued)

		Project #	Project Name	South County Allocation	South County Share	North County Share	Total FY 2011	Basis of Allocation
Water Supply	Water Supply Acquisition & Storage	91081007	Dam Safety Program	22.5%	335	1,156	1,491	Program Benefit Calculation
		91081012	Dam Maintenance EIR	21.6%	15	56	72	Program Benefit Calculation
		91131004	Imported Water Program	10.0%	423	3,806	4,229	Imported Water Ratio
		91761001	Local Res & Diversion Ops Plng & Anal	18.9%	63	271	334	Total Water Deliveries Ratio
		91761099	Dams & Reservoir Gen Maint	21.6%	208	756	964	Program Benefit Calculation
		61A01085	Local Reservoir/Diversion Ops	18.9%	56	240	296	Total Water Deliveries Ratio
					1,101	**6,285**	**7,386**	
	Imported Water Purchases	91131006	IW San Felipe Division Delvrs	10.9%	1,990	16,265	18,255	Program Benefit Calculation
		91131007	IW South Bay Aqueduct Delvrs	0.0%	-	22,411	22,411	No South County Benefit
					1,990	**38,677**	**40,667**	
	Raw Water Transmission & Distribution	91211004	San Felipe Reach 1 Operations	15.8%	84	447	531	CVP Imported Water Ratio
		91211084	San Felipe Reach1 Ctrl and Ele	15.8%	35	185	220	CVP Imported Water Ratio
		91211085	San Felipe Reach 1 Eng - Other	15.8%	28	151	180	CVP Imported Water Ratio
		91211099	San Felipe Reach 1 Gen Maint	15.8%	123	657	780	CVP Imported Water Ratio
		91221002	San Felipe Reach 2 Operations	15.8%	5	24	29	CVP Imported Water Ratio
		91221004	San Felipe Reach2 Ctrl & Ele	15.8%	14	72	86	CVP Imported Water Ratio
		91221006	San Felipe Reach 2 Eng - Other	15.8%	20	106	126	CVP Imported Water Ratio
		91221099	San Felipe Reach 2 Gen Maint	15.8%	16	83	99	CVP Imported Water Ratio
		91231002	San Felipe Reach 3 Operations	15.8%	21	241	262	CVP Imported Water Ratio
		91231084	San Felipe Reach3 Ctrl and Ele	15.8%	17	195	212	CVP Imported Water Ratio
		91231085	San Felipe Reach 3 Eng - Other	15.8%	12	143	155	CVP Imported Water Ratio
		91231099	San Felipe Reach 3 Gen Maint	15.8%	79	587	665	CVP Imported Water Ratio
		92261099	Vasona Pump Station Gen Maint	0.0%	-	66	66	No South County Benefit
		92761001	Raw Water T&D Gen'l Oper	13.6%	141	894	1,035	Raw Water Deliveries
		92761082	Raw Water T&D Ctrl and Electr	13.6%	50	317	367	Raw Water Deliveries
		92761083	Raw Water T&D Eng - Other	13.6%	16	104	121	Raw Water Deliveries
		92761099	Raw Water T & D Gen Maint	13.6%	130	827	957	Raw Water Deliveries
		95111004	Untreated Water Prog Plng & Anal	37.3%	20	34	54	Untreated Water Deliveries Ratic
		95761003	SCADA Network Administration	1.6%	2	135	138	Program Benefit Calculation
		95861002	Anderson Hydroelectric Fac Ops	13.6%	3	21	24	Raw Water Deliveries
		95861099	Anderson Hydroelec Facil Maint	13.6%	6	38	43	Raw Water Deliveries
		61A01088	Untreated Water Field Ops	37.3%	25	42	67	Untreated Water Deliveries Ratic
		N/A	San Felipe Ops Placeholder	15.8%	13	70	83	CVP Imported Water Ratio
					859	**5,439**	**6,298**	
Water Supply Planning	Short-term Water Supply Planning & Operations	91041012	Operations Planning Water	13.6%	25	160	185	Raw Water Deliveries
		91061005	Water Supply Accounting	13.6%	24	155	180	Raw Water Deliveries
		95811043	Hydrologic Data Management	16.6%	113	566	678	Stream Gauge Locations
					162	**881**	**1,043**	
	Water Supply System Sustainability	91111001	Water Rights	23.7%	37	120	157	Water Rights Volume
		92781002	RW Corrosion Control	13.6%	44	281	325	Raw Water Deliveries
		95011003	Asset Protection Support	20.0%	97	388	485	Program Benefit Calculation
					178	**789**	**967**	
	Long-term Water Supply Planning	91041002	Water Supply Management Tools	10.2%	22	190	212	M&I Water Usage Ratio
		91042008	Infrtr Reliabiliy Program	10.2%	6	53	59	M&I Water Usage Ratio
		91042011	Bay Area Water Supply Coord	0.0%	-	80	80	No South County Benefit
		91042014	Urban Water Management Plan 08	10.2%	14	121	135	M&I Water Usage Ratio
		91042016	Water Shortage Contingency Plan	10.2%	58	515	573	M&I Water Usage Ratio
		95041039	Integrated Planning	10.2%	9	80	89	M&I Water Usage Ratio
		95042031	Comprehensive WRM Plan	10.2%	5	42	47	M&I Water Usage Ratio
		95042037	Future Funding Strategies	10.2%	16	142	158	M&I Water Usage Ratio
		95061007	Water Utility Asset Mgmt Program	1.4%	10	690	700	Program Benefit Calculation
		95731001	Water Supply Modeling/Analysis	10.2%	39	341	379	M&I Water Usage Ratio
		95741001	WUE Long-term Planning	10.2%	102	900	1,002	M&I Water Usage Ratio
					280	**3,154**	**3,434**	

Basis of Operating Cost Allocations Between North and South Zones (In Thousands $) . . . (Continued)

		Project #	Project Name	South County Allocation	South County Share	North County Share	Total FY 2011	Basis of Allocation
Recycling & Conservation	Water Recycling	91181001	Water Recycling - General	6.0%	109	1,705	1,814	Population
		92761008	Recycled Water T&D gen Main	100.0%	78	-	78	Benefits Only South County
					187	**1,705**	**1,892**	
	Water Conservation	91151001	Water Conservation Prog Support	6.0%	76	1,195	1,271	Population
		91151007	Water Conservation - Residential	5.9%	136	2,169	2,305	Program Benefit Calculation
		91151008	Water Conservation - Commercial	5.1%	95	1,775	1,870	Program Benefit Calculation
		91151009	Water Conservation - Ag	53.6%	221	191	412	Program Benefit Calculation
		91151010	Water Conservation - Landscape	7.0%	132	1,749	1,881	Program Benefit Calculation
		91152007	Water Conservation	6.0%	67	1,052	1,120	Population
					727	**8,132**	**8,859**	
Natural Resource Protection	Resource Protection	91061001	Environmental Planning & Compliance	18.3%	202	901	1,102	Estimated labor
		91451002	Well Ordinance Program	11.8%	149	1,110	1,259	Well Permits and Inspections
		91451005	Source Water Quality Management	10.2%	51	449	499	M&I Water Usage Ratio
		91452010	Perchlorate Bkgrnd Source Study	100.0%	16	-	16	Benefits Only South County
		95011002	Llagas Fire Mgmt	100.0%	131	-	131	Benefits Only South County
		95041025	SMP Biodiversity Monitoring	10.2%	4	33	37	M&I Water Usage Ratio
					552	**2,493**	**3,044**	
	Mitigations to Protect Natural Resources	91061012	Environmental Compliance Support	13.6%	4	25	29	Raw Water Deliveries
		91742041	Comprehensive Habitat Conservation Plan	18.6%	22	96	118	Geography of Planning Area
		92041014	Environmental Strategy - FAHCE	4.3%	57	1,260	1,317	Coyote Water Supply Ratio
		92061012	Environmental Compliance Support	13.6%	7	46	53	Raw Water Deliveries
		93061012	Environmental Compliance Support	0.0%	-	343	343	No South County Benefit
		95771011	District Urban Runoff Program	13.6%	10	64	74	Raw Water Deliveries
					100	**1,833**	**1,933**	
	Climate Change Mitigation &	95062036	Prepare for Climate Change	10.2%	14	124	138	M&I Water Usage Ratio
					14	**124**	**138**	
Support Services	Water Utility Business Services	91061007	Districtwide Salary Savings	10.2%	(54)	(471)	(525)	M&I Water Usage Ratio
		95001090	Unscoped Operations Activities	10.2%	51	449	500	M&I Water Usage Ratio
		95061027	Water Utility Health and Safety	15.0%	49	275	324	Number and Types of Facilities
		95061032	Water Utility Safety Training	15.0%	114	647	761	Number and Types of Facilities
		95061038	WUE Administration	10.2%	741	6,527	7,269	M&I Water Usage Ratio
		95061039	Ops Business Mgmt Support	10.2%	137	1,204	1,340	M&I Water Usage Ratio
		95061041	WU As-Built Drawing Control	10.2%	34	301	335	M&I Water Usage Ratio
		95111003	Water Use Measurement General	35.0%	388	720	1,108	Labor hours
		95121001	Fin/Economic Water Rate Study	10.2%	43	383	426	M&I Water Usage Ratio
		95771031	HAZMAT Emergency Response	9.1%	2	20	22	Emergency Response Events
		61A01084	Water Utility Water Revenue Program	61.7%	716	445	1,161	Program Costs
					2,222	**10,500**	**12,723**	
	Strategic Support Services	95061012	Rental Expense San Pedro, MH	100.0%	24	-	24	Benefits Only South County
		95061037	WU Workforce Development	10.2%	67	591	659	M&I Water Usage Ratio
		95071041	Welding Services	1.2%	1	88	89	Weighted Labor
		95761071	Emergency Services	6.0%	25	389	413	Population
		95811046	Warehouse Services	10.2%	36	316	351	M&I Water Usage Ratio
		95811054	Real and Non-Residential Property Mgmt	0.0%	-	36	36	No South County Benefit
					153	**1,420**	**1,572**	
				TOTAL	**10,930**	**118,122**	**129,052**	
		Note: Projects 91231002, 91231084, 912341085, and 91231099 have been adjusted for the Coyote Pumping Plant costs.						

APPENDIX C

South County Capital Cost Recovery

	(In Thousands $)					
Job Description	**Total Project Cost**	**South County %**	**South County Cost**	**FY 11 Cost Recovery***	**Year Cost Recovery is Complete**	**Basis of Allocation to the South**
Coyote Dam Outlet**	$ 6,703	15.0%	$ 1,005	$ 81	FY 12	Water usage
Uvas Reservoir Valves Replace	$ 303	100.0%	$ 303	$ 25	FY 14	Benefits only South County
Madrone Pipeline Replace	$ 389	100.0%	$ 389	$ 31	FY 14	Benefits only South County
Uvas Dam & Reservoir	$ 1,124	100.0%	$ 1,124	$ 88	FY 22	Benefits only South County
San Pedro Recharge Facility	$ 1,882	100.0%	$ 1,882	$ 147	FY 22	Benefits only South County
San Pedro Recharge house	$ 700	100.0%	$ 700	$ 47	FY 31	Benefits only South County
Recycled Water Improvements I	$ 7,232	100.0%	$ 7,232	$ 481	FY 32	Benefits only South County
Recycled Water Improvements II	$ 118	100.0%	$ 118	$ 8	FY 33	Benefits only South County
Recycled Water Improvements III	$ 1,721	100.0%	$ 1,721	$ 115	FY 34	Benefits only South County
Water Banking Rights	$ 6,226	8.0%	$ 498	$ 33	FY 36	Total Imported Water Ratio
Geodetic Control Maintenance	$ 236	41.0%	$ 97	$ 6	FY 36	Survey Analysis
Recycled Water - SCRWA Filter Upgrade	$ 3,257	100.0%	$ 3,257	$ 216	FY 37	Benefits only South County
Water Banking FY 06	$ 18,895	9.0%	$ 1,701	$ 113	FY 36	Total Imported Water Ratio
San Felipe Division Capital	$ 6,894	9.4%	$ 648	$ 648	N/A	Repayment Cost Distribution
Small Caps, San Felipe	$ 2,065	15.8%	$ 326	$ 326	N/A	CVP Imported Water Ratio
Santa Clara Tunnel Landslide	$ 4,509	15.1%	$ 681	$ 45	FY 39	CVP Imported Water Ratio
SC Tunnel Landslide Mitigation	$ 313	15.1%	$ 47	$ 3	FY 39	CVP Imported Water Ratio
Water Infrastructure Reliability Program	$ 2,134	1.5%	$ 32	$ 2	FY 36	Program benefit calculation
Water Infrastructure Baseline Improvement	$ 2,403	3.6%	$ 87	$ 6	FY 38	Spare pipe usage
Coyote Dam Control Building Improvement	$ 347	10.2%	$ 35	$ 2	FY 40	M&I Water Usage Ratio
Raw Water Control System	$ 9,188	4.3%	$ 399	$ 26	FY 37	Program benefit calculation
Small Caps, Raw Water	$ 478	13.6%	$ 65	$ 65	N/A	Raw Water Usage
Information Systems Management	$ 5,802	9.8%	$ 569	$ 38	FY 40	M&I Water Usage Ratio
Peoplesoft Upgrade	$ 78	9.8%	$ 8	$ 1	FY 39	M&I Water Usage Ratio
Corp Yard Relocation	$ 26	10.2%	$ 3	$ 0	FY 40	M&I Water Usage Ratio
Capital Program Administration	$ 4,094	8.2%	$ 336	$ 337	N/A	Total Capital Cost Ratio
Grand Total	**$ 87,116**		**$ 23,262**	**$ 2,889**		

* Capital projects that benefit South County are paid for over the life of the project (typically 30 years) beginning when the project is completed

** Actual project costs unable to be verified as the financial system in place in the 1980's has long since been retired

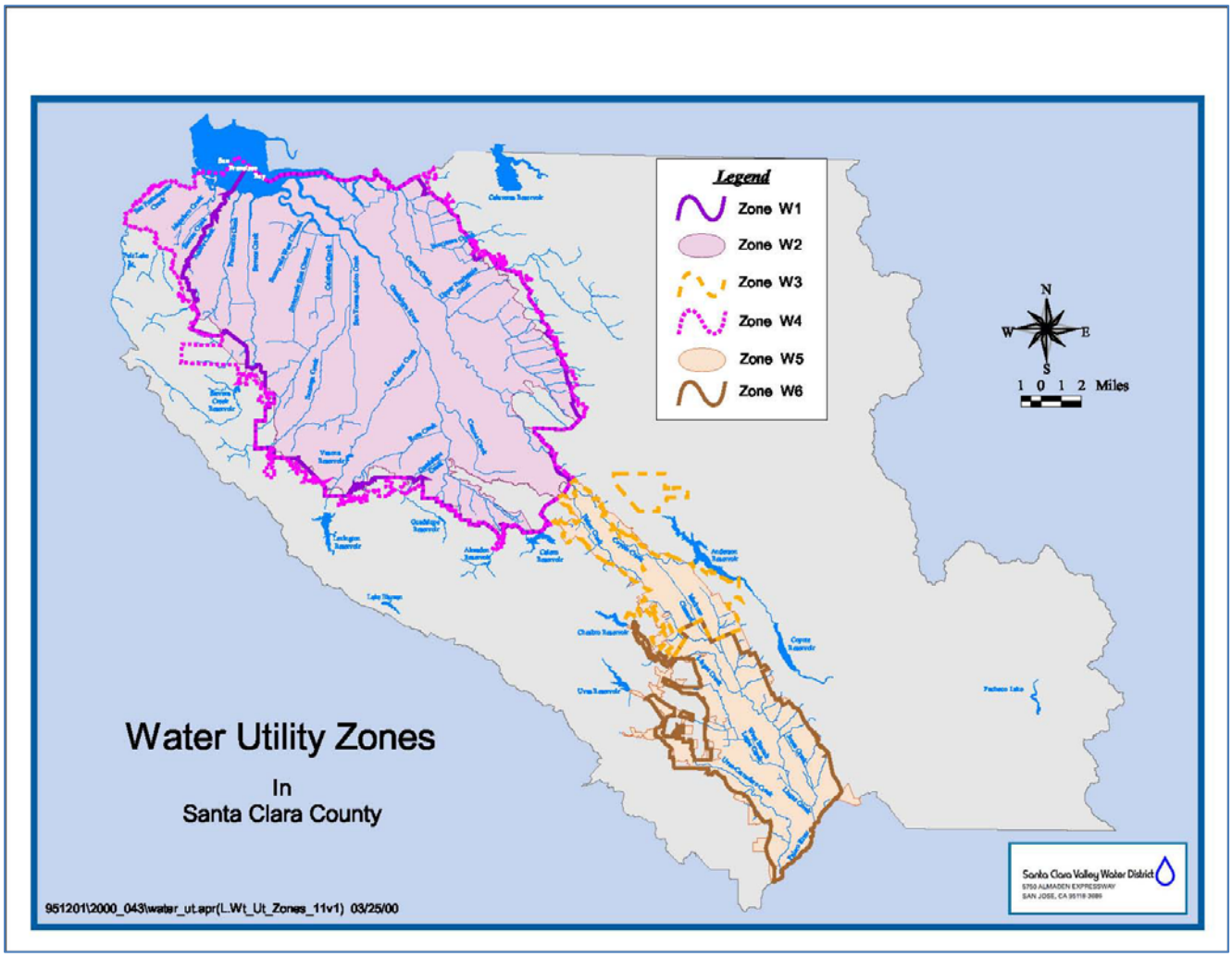
APPENDIX D

Acronyms

ABAG	Association of Bay Area Governments
AF	Acre Feet
AG	Agriculture
BDCP	Bay Delta Conservation Plan
Board	District Board of Directors
CEO	Chief Executive Officer
CIP	Capital Improvement Project
CVP	Central Valley Project
DHCCP	Delta Habitat Conservation and Conveyance Program
District	Santa Clara Valley Water District
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
FAHCE	Fisheries and Aquatic Habitat Collaborative Effort
FY	Fiscal Year
HCP	Habitat Conservation Plan
IWRP	Integrated Water Resources Plan
M&I	Municipal and Industrial
RFC	Raftelis Financial Consultants, Inc
SCVWD	Santa Clara Valley Water District
SFPUC	San Francisco Public Utilities Commission
SWP	State Water Project
SW	Surface Water
Three Creeks	Three Creeks Habitat Conservation Plan
UWMP	Urban Water Management Plan
Valley HP	Santa Clara Valley Habitat Plan
Zone W2	North County
Zone W5	South County

APPENDIX E

Maps


Legend
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Zone W3
Zone W4
Zone W5
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Water Utility Zones
In
Santa Clara County
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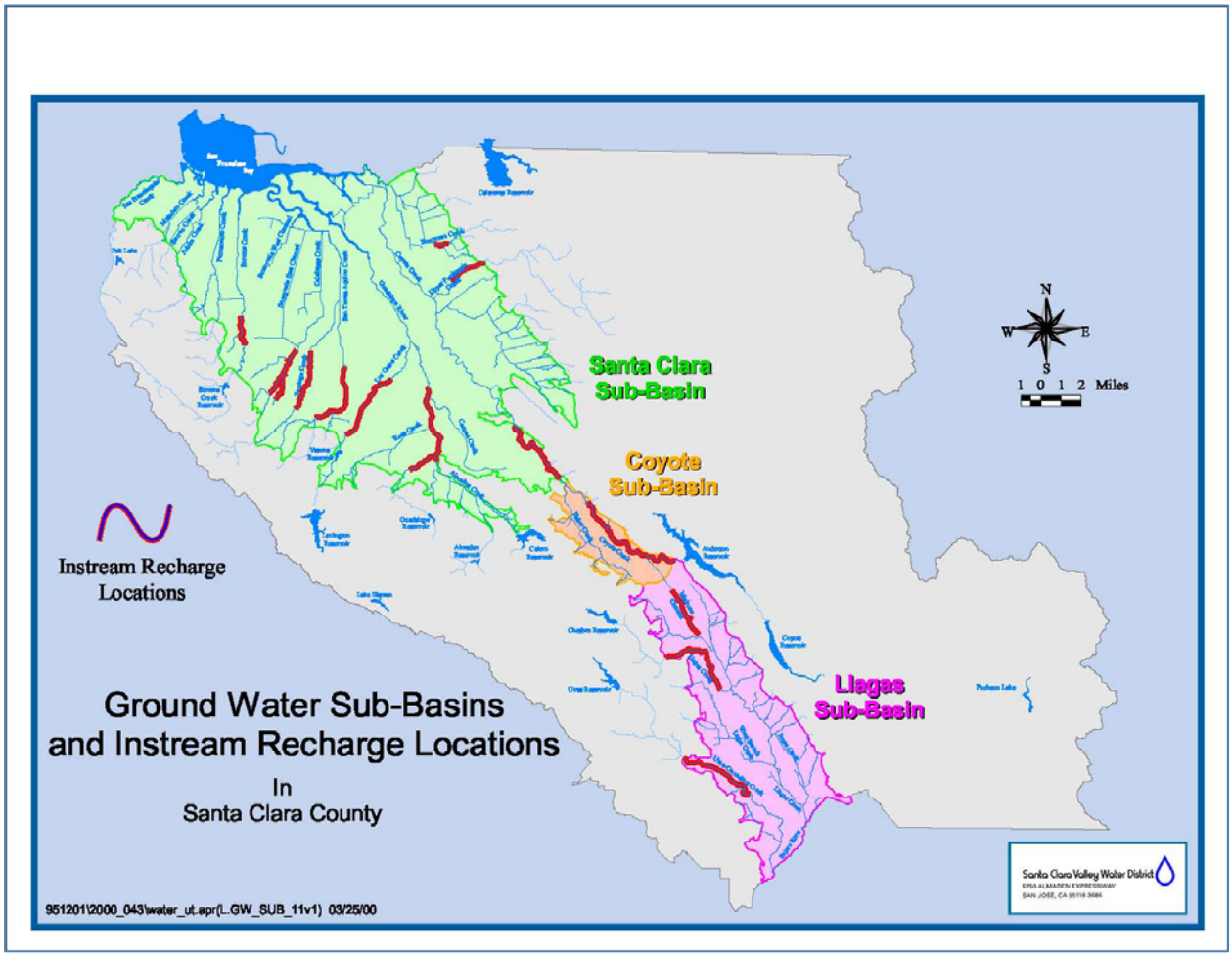
Santa Clara Valley Water District


Santa Clara
Sub-Basin
Coyote
Sub-Basin
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Sub-Basin
Instream Recharge
Locations
Ground Water Sub-Basins
and Instream Recharge Locations
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Santa Clara County
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Santa Clara Valley Water District
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Water Supplies 2010/2011

About our water supplies

Local water

A complex network of reservoirs, creeks and specialized ponds to maximize the amount of local rainwater that replenishes the groundwater basin. The same system is also used to transport imported water so that it, too, can be used to replenish the aquifer. It all works so well that "managed" recharge actually exceeds natural recharge. Water pumped from the groundwater basin through wells is used by private well owners, farmers, and water retailers. Some water captured in reservoirs is processed at state-of-the art drinking water treatment plants. The treated water is sold to local water retailers such as San Jose Water Company who use their own distribution systems to serve customers.

Imported water

Much of the county's current water supply comes from hundreds of miles away. First as snow or rain in the Sierra Nevada range of northern and eastern California, then as water in rivers that flow toward the Sacramento-San Joaquin River Delta. Often called "imported water" it is brought into the county through the complex infrastructure of the State Water Project, the federal Central Valley Project and San Francisco's Hetch Hetchy system. Three drinking water treatment plants allow immediate delivery of imported water to customers, while the rest is used to replenish groundwater basins. Having treated imported water available to meet demands protects the groundwater basin from over-pumping.

Recycled water

An important and growing source of water is recycled water. Used primarily for irrigation by industry and agriculture, recycled water is wastewater that has been purified to meet strict standards set by the California Department of Health Services. Using recycled water helps conserve drinking water supplies, provides a dependable, drought-proof, locally-controlled water supply, reduces dependency on imported water and groundwater and helps preserve our saltwater and tidal habitat by reducing freshwater discharge to the bay.

20 years of water planning

In the 20 years since the last extended drought, the water district has invested in a diverse water portfolio as a strategy to buffer impacts from shortages, maintain water in the groundwater aquifer and to provide a reliable supply. These investments lessen the magnitude of critical shortages in supplies due to hydrologic conditions and regulatory actions.

Santa Clara County

by the numbers

Water supplies

30% local water
- 15% natural groundwater
- 10% from reservoirs to groundwater
- 5% from reservoirs to drinking water treatment plants

55% imported water
- 15% thru Delta to replenish groundwater
- 25% thru Delta to drinking water treatment plants
- 15% from Hetch Hetchy system

5% recycled water

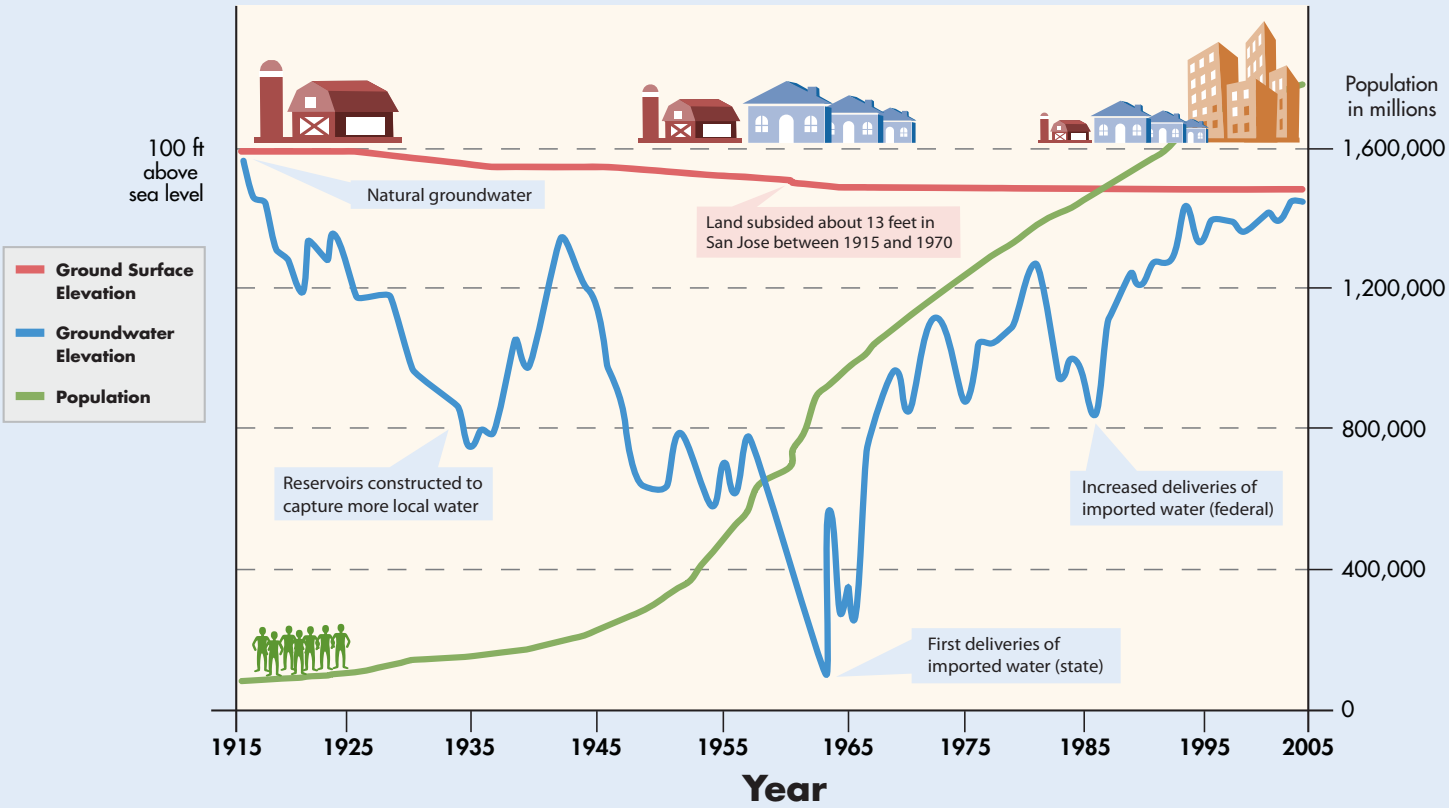
90%

10% savings needed

100%

Based on Urban Water Management Plan and 2008 actuals.

Groundwater at-a-glance



A graphic representation based on historical data

Santa Clara Valley Water District℠

5750 Almaden Expwy
San Jose, CA 95118
www.valleywater.org

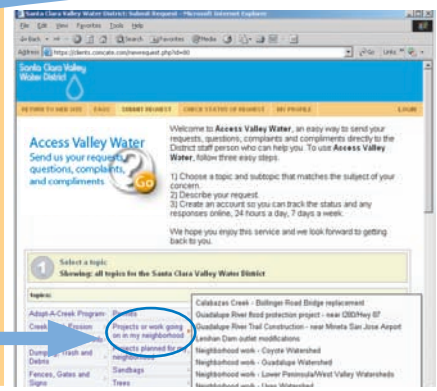
On the cover:

1. Uvas Reservoir, west of Gilroy
2. Inside outlet tunnel under Lenihan Dam, south of Los Gatos
3. Safe reliable drinking water

Contact us

For more information, contact Customer Relations at **(408) 265-2607, ext. 2000.**

Also, visit our website at www.valleywater.org and use our Access Valley Water customer request and information system. With three easy steps, you can use this service to find out the latest information on the project or to submit questions, complaints or compliments directly to a district staff person.



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